

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Power Cost Adjustment Clause

All metered rates shall be subject to a positive or negative power cost adjustment charge equivalent to the amount by which the current cost of power (per kilowatt-hour of sales) is greater or lesser than the base cost of power purchased and produced (per kilowatt-hour of sales).

The current cost per kilowatt-hour of energy billed is equal to the cost of power purchased and produced for the most recent month, divided by the kilowatt-hours of energy sold. The monthly adjustment (rounded to the nearest one one-hundredth of a cent) is equal to the current cost less the base cost. The base cost of power (U) is \$0.0609 per kilowatt-hour.

Periodic changes shall be made to maintain the proper relative structure of the rates and to insure that power costs are being equitably recovered from the various rate classes. If, after final wholesale rates have been authorized, the monthly adjustment (A) exceeds \$0.0150 per kilowatt-hour, the company shall file a request with the Public Service Commission of Wisconsin within 30 days for changes in rates to incorporate a portion of the power cost adjustment into the base rates.

For purposes of calculating the power cost adjustment charge, the following formula shall be used:

$$A = \frac{C}{S} - U$$

- A is the power cost adjustment rate in dollars per kilowatt-hour rounded to four decimal places applied on a per kilowatt-hour basis to all metered sales of electricity.
- S is the total kilowatt-hours sold during the most recent month.
- U is the base cost of power, which equals the average cost of power purchased and produced per kilowatt-hour of sales for the test year period. This figure remains constant in each subsequent monthly calculation at \$0.0609 per kilowatt-hour until otherwise changed by the Public Service Commission of Wisconsin.
- C is the cost of power purchased and produced in dollars credited for revenues derived from wholesale power sales, plus any voluntary interruption compensation payments to retail customers, all from the most recent month. Cost of power purchased and produced and revenues derived from wholesale power sales and any related wheeling expenses, used for calculation of C are the monthly amounts which would be recorded in the following account of the Uniform System of Accounts:

Class A & B utilities

Accounts 447, 501, 536, 547, 555, and 565

RATE FILE

Sheet No.	1 of 1
Schedule No.	Rg-1
Amendment No.	72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Residential Service

Application: This rate will be applied to urban residential single-phase customers for ordinary household purposes. Single-phase motors may not exceed 5 horsepower individual-rated capacity without utility permission.

Customers who do not meet these criteria will be served under the applicable rate.

Customer Charge: Monthly: \$7.50 per month.
 Seasonal: \$30.00 per customer for each of the
 three billing periods per year.

Energy Charge: \$0.1187 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be the customer charge.

Prompt Payment of Bills: A charge of no more than 1 percent per month will be added to bills not paid within 20 days from date of issuance. The late payment charge shall be applied to the total unpaid balance for utility service, including unpaid payment charges. This charge is applicable to all customers.

Seasonal Customers: A seasonal customer shall be defined as one who used electric energy seven months or less during each year. Urban seasonal customers shall qualify for the above rate; however, meters shall be read and billed three times a year on either a May-July-September, or June-August-October basis at the option of the utility. Each billing will consist of the customer charge, plus the energy charge, with the minimum being the customer charge.

Special Terms and Provision:

1. This rate applies only to customers living in or immediately adjacent to incorporated villages served and who, in the opinion of the company, can be served directly from the local distribution systems without special line or substation construction.
2. Only single-phase service at 120 or 120/240 volts, rendered through one meter, is available under this rate. If three-phase service is supplied, it shall be under rates available for such service.
3. Motors and other equipment which interfere with service to neighboring customers will not be permitted on this rate.

EFFECTIVE:	February 25, 2013
PSCW AUTHORIZATION:	Order in Docket 4280-ER-105, Mailed February 21, 2013

RATE FILE

Sheet No. 1 of 1

Schedule No. Rg-2

Amendment No. 72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Residential Time-of-Day Service

Application: This rate will be applied, on an optional basis, to all residential customers who qualify for the Rg-1 rate. Customers choosing to be served on this rate schedule must remain on it for a minimum of a 12-month period and waive all rights to any billing adjustments arising from a claim that the bill for the customer's service would be cheaper on any alternative rate schedule for any period of time.

Customer Charge: Regular Customers: \$7.50 per customer per month.
Seasonal Customers: \$30.00 per customer for each of the
three billing periods per year.

Energy Charge: On-peak: \$0.1743 per kilowatt-hour (kWh).
Off-peak: \$0.0875 per kWh.

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be the customer charge.

Prompt Payment of Bills: Same as Rg-1.

Seasonal Customers: Seasonal customers shall be defined as shown in Schedule Rg-1 and will be served under the same terms and conditions as in Rg-1.

Special Terms and Provisions: Same as Rg-1.

On-peak and Off-peak Pricing Periods:

On-peak: The on-peak hours shall be those hours designated by the utility's wholesale supplier as peak hours. They are 9:00 a.m. to 9:00 p.m. each day, Monday through Friday, inclusive, except for designated holidays. However, customers are allowed to choose 8:00 a.m. to 8:00 p.m., as the peak period. Once a customer selects one of these two peak periods, that customer has to stay on it for a minimum of one year.

Off-peak: All times not specified as on-peak, including all day Saturday and Sunday, and the following holidays: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day; or the day nationally designed to be celebrated as such.

EFFECTIVE: February 25, 2013

PSCW AUTHORIZATION: Order in Docket 4280-ER-105, Mailed February 21, 2013

RATE FILE

Sheet No. 1 of 1

Schedule No. Fg-1

Public Service Commission of Wisconsin

Amendment No. 72

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Rural Residential Service

Application: This rate will be applied to all rural residential and farm customers for lighting, ordinary household purposes and power as needed for farm uses. A customer's load may not exceed 10 horsepower individual-rated capacity without utility permission.

Customers who do not meet these criteria will be served under the appropriate rate.

Customer Charge: Monthly: \$8.50 per month.
Seasonal: \$34.00 per customer for each of the
three billing periods per year.

Energy Charge: \$0.1236 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see Schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be the customer charge.

Prompt Payment of Bills: Same as Rg-1.

Seasonal Customers: Same as Rg-1.

Special Terms and Provisions:

1. This rate applies to customers living outside the distribution system of any city or village or in a locality where the density of population is less than that encountered ordinarily in urban districts and to all seasonal residential customers.
2. Only single-phase service at 120 or 120/240 volts, rendered through one meter, is available under this rate. If three-phase service is supplied, it shall be under rates available for such service
3. Motors and other equipment which interfere with service to neighboring customers will not be permitted on this rate.

EFFECTIVE: February 25, 2013

PSCW AUTHORIZATION: Order in Docket 4280-ER-105, Mailed February 21, 2013

RATE FILE

Sheet No. 1 of 1

Schedule No. Fg-2

Public Service Commission of Wisconsin

Amendment No. 72

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Rural Residential Time-of-Day Service

Application: This rate will be applied, on an optional basis, to all residential customers who qualify for the Fg-1 rate. Customers choosing to be served on this rate schedule must remain on it for a minimum of a 12-month period and waive all rights to any billing adjustments arising from a claim that the bill for the customer's service would be cheaper on any alternative rate schedule for any period of time.

Customer Charge: Regular Customers: \$8.50 per customer per month.
Seasonal Customers: \$34.00 per customer for each of the
three billing periods per year.

Energy Charge: On-peak: \$0.1793 per kilowatt-hour (kWh).
Off-peak: \$0.0926 per kWh.

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see Schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be the customer charge.

Prompt Payment of Bills: Same as Rg-1.

Seasonal Customers: Seasonal customers shall be defined as shown in Schedule Rg-1 and will be served under the same terms and conditions as in Rg-1.

Special Terms and Provisions: Same as Fg-1.

On-peak and Off-peak Pricing Periods: Same as Rg-2.

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RATE FILE

Sheet No. 1 of 2

Schedule No. Rw-1

Amendment No. 72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Controlled Water and Space Heating

Application: This rate will be applied to customers who have automatic storage type water heaters of not less than 30-gallon capacity and/or electric heating loads under 40 kW in a dual fuel space heating system. Such water heaters and heating systems shall be controlled by the company and are allowed to operate only during off-peak periods. Customers served on this rate are required to have a separate meter for this type of service.

Customer Charge: \$3.00 per customer per month.

Energy Charge: \$0.0875 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see Schedule PCAC.

Minimum Monthly Charge: The minimum monthly charge shall be the customer charge.

Prompt Payment of Bills: Same as Rg-1.

Special Terms:

1. Heating systems billed on this rate will be allowed to operate for a minimum of twelve (12) hours a day and water heaters will be allowed to operate for a minimum of sixteen (16) hours a day. If a water heater and space heating system are controlled through the same meter, they will be allowed to operate for a minimum of twelve (12) hours a day.
2. The company will require that water heaters and dual fuel space heating be connected on separate circuits which are enclosed in rigid conduit or armored cable. The installation and wiring must conform to the company's standards, and will be inspected by the company before service is rendered.
3. The company will furnish a timing device to control a standard size water heater not exceeding 4500 watts per element (top and bottom) at no charge to the customer. Customers having water heaters larger than 4500 watts per element will be required to pay the extra cost of such device. Disconnection hours are 9:00 a.m. to 1:00 p.m. and 5:00 p.m. to 9:00 p.m.
4. When this rate is used for dual heating, the customer is required to maintain an alternative back-up source of energy other than electricity. Such source should be adequate to provide customers with their needs of heat when electric heating systems are not operating. Dual fuel customers are also required to pay for rewiring and other related costs, for the purpose of meter installation.

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PSCW AUTHORIZATION: Order in Docket 4280-ER-105, Mailed February 21, 2013

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Controlled Water and Space Heating**Special Terms (continued):

5. The company will furnish, install and maintain on customer's premises a watt-hour meter to measure the energy supplied to the space heating equipment and a time switch, or other device, to control the hours of service. The time regulating device shall be under the sole control of the company and shall be adjusted by the company to disconnect the electrical supply during each daily period as the company may elect from time to time. Disconnection hours are 9:00 a.m. to 9:00 p.m., Monday through Friday, excluding the following holidays:

New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day; or the day nationally designed to be celebrated as such.
6. A customer served on this rate is not allowed to switch on more than a 10 kilowatt load at a time.
7. Service under this rate is for the exclusive use of the customer and is not to be resold or shared with others.
8. Equipment which interferes with service to neighboring customers will not be permitted on this rate. See Section 116, Electric Rules.
9. Maintenance work will be done only during the company's regular hours.
10. The company shall have the right to remove customers from this rate if they violate any of its provisions and begin billing them on the appropriate rate; provided that they are given the appropriate notification.
11. The company shall not be liable for any loss or damage caused by, or resulting from, any interruption in service.
12. Customers who ask for service during hours of disconnection will be charged the regular firm rate.
13. Only single-phase service at 120/240 volts, rendered through one meter, is available under this rate.

RATE FILE

Sheet No.	1 of 1
Schedule No.	Gs-1
Amendment No.	72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

General Service

Application: This rate will be applied to single and three-phase customers. This includes commercial, institutional, government and other customers. The monthly Maximum Measured Demand of customers served on this rate shall not exceed 20 kilowatts for three or more months in a consecutive 12-month period.

Gs-1 customers shall be transferred into the appropriate demand class as soon as the application conditions of that class have been met.

Customer Charge:

Regular Customers: Single-phase: \$15.00 per customer per month.
Three-phase: \$25.00 per customer per month.

Seasonal Customers: Single-phase: \$60.00 per billing.
Three-phase: \$100.00 per billing.

Energy Charge: \$0.1187 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be the customer charge.

Prompt Payment of Bills: Same as Rg-1.

Seasonal Customers: A seasonal customer shall be defined as one who used electric energy seven months or less during each year. Urban seasonal customers shall qualify for the above rate; however, meters shall be read and billed three times a year on either a May-July-September, or June-August-October basis at the option of the utility. Each billing will consist of the customer charge, plus the energy charge, with the minimum being the customer charge.

Determination of Maximum Measured Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatts-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month.

RATE FILE

Sheet No. 1 of 1

Schedule No. Gs-2

Public Service Commission of Wisconsin

Amendment No. 72

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**General Service Time-of-Day**

Application: This rate will be applied, on an optional basis, to all general service customers who qualify for the Gs-1 rate. Customers choosing to be served on this rate schedule must remain on it for a minimum of a 12-month period and waive all rights to any billing adjustments arising from a claim that the bill for the customer's service would be cheaper on any alternative rate schedule for any period of time.

Customer Charge:

Regular Customers:

Single-Phase: \$15.00 per customer per month.

Three-phase: \$25.00 per customer per month.

Seasonal Customers:

Single-phase: \$60.00 per billing.

Three-phase: \$100.00 per billing.

Energy Charge: On-peak: \$0.1743 per kilowatt-hour (kWh).
Off-peak: \$0.0875 per kWh.

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see Schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be the customer charge.

Prompt Payment of Bills: Same as Rg-1.

Seasonal Customers: Same as Rg-1.

On-peak and Off-peak Periods: Same as Rg-2

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PSCW AUTHORIZATION: Order in Docket 4280-ER-105, Mailed February 21, 2013

RATE FILE

Sheet No. 1 of 1

Schedule No. Cp-1

Amendment No. 72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Small Power Service

Application: This rate will be applied to customers for all types of service if their monthly Maximum Measured Demand is in excess of 20 kilowatts (kW) per month, but not more than 200 kilowatts per month, for three or more months in a consecutive 12-month period.

Customers billed on this rate shall continue to be billed on this rate until their monthly Maximum Measured Demand is less than 20 kW per month for 12 consecutive months. The utility shall offer a customer billed on this rate the option to continue to be billed on this rate for another 12 months if their monthly Maximum Measured Demand is less than 20 kW per month. However, this option shall be offered with the provision that the customer waives all rights to billing adjustments arising from a claim that the bill for service would be less on another rate schedule than under this rate schedule.

Customer Charge: \$30.00 per month.

Distribution Demand Charge: \$1.50 per kW of the highest monthly maximum Measured Demand occurring in the current month or preceding 11-month period.

Demand Charge: \$6.00 per kW of billed demand.

Energy Charge: \$0.0734 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Prompt Payment of Bills: Same as Rg-1.

Minimum Monthly Bill: The minimum monthly bill shall be equal to the customer charge, plus the distribution demand charge.

Determination of Maximum Measured Demand and Billed Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatts-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month. The billed demand shall be the Maximum Measured Demand.

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RATE FILE

Sheet No. 1 of 2

Schedule No. Cp-2

Amendment No. 72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Small Power Optional Time-of-Day

Application: This rate will be applied on an optional basis to customers for all types of service if their monthly Maximum Measured Demand is in excess of 20 kilowatts (kW) per month, but not more than 200 kilowatts per month, for three or more months in a consecutive 12-month period.

Customers who choose to be billed on this rate are required to stay on it for a minimum of 12 months. At the end of the 12 month period, the customer will have the choice to remain on it or be billed on the regular small power rate, Cp-1. Customers opting to be billed on this rate may stay on it until their monthly Maximum Measured Demand is less than 20 kW per month for 12 consecutive months. However, this option shall be offered with the provision that the customer waives all rights to billing adjustments arising from a claim that the bill for service would be less on another rate schedule than under this rate schedule.

Customer Charge: \$30.00 per month.

Distribution Demand Charge: \$1.50 per kW of the highest monthly Maximum Measured Demand occurring in the current month or preceding 11-month period.

Demand Charge: \$6.00 per kW of on-peak billed demand.

Energy Charge: On-peak : \$0.0821 per kilowatt-hour (kWh).
Off-peak: \$0.0659 per kWh.

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be equal to the customer charge, plus the distribution demand charge.

Prompt Payment of Bills: Same as Rg-1.

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RATE FILE

Sheet No. 2 of 2

Schedule No. Cp-2

Public Service Commission of Wisconsin

Amendment No. 72

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Small Power Optional Time-of-Day (continued)**Pricing Periods:

- On-peak: The on-peak hours shall be those hours designated by the utility's wholesale supplier as peak hours. They are 9:00 a.m. to 9:00 p.m. each day, Monday through Friday, inclusive, except for designated holidays. However, customers are allowed to choose 8:00 a.m. to 8:00 p.m. as the peak period. Once a customer selects one of these two peak periods, that customer has to stay on it for a minimum of one year.
- Off-peak: All times not specified as on-peak including all day Saturday and Sunday, and the following holidays; New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day; or the day nationally designated to be celebrated as such.

Determination of Maximum Measured Demand and On-peak Billed Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatts-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month. The on-peak billed demand shall be the Maximum Measured Demand which occurs during the on-peak period.

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February 25, 2013

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RATE FILE

Sheet No. 1 of 2

Schedule No. Cp-3

Amendment No. 72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Large Power Time-of-Day

Application: This rate will be applied on a mandatory basis to all customers for all types of service if their monthly Maximum Measured Demand is in excess of 200 kilowatts (kW) per month for three or more months in a consecutive 12-month period.

Customers billed on this rate shall continue to be billed on it until their monthly Maximum Measured Demand is less than 200 kW per month for 12 consecutive months. The utility shall offer a customer billed on this rate the option to continue to be billed on this rate for another 12 months if their monthly Maximum Measured Demand is less than 200 kW per month. However, this option shall be offered with the provision that the customer waives all rights to billing adjustments arising from a claim that the bill for service would be less on another rate schedule than under this rate schedule.

Customer Charge: \$60.00 per month.

Distribution Demand Charge: \$1.50 per kW of the highest monthly maximum measured demand occurring in the current month or preceding 11-month period.

Demand Charge: \$6.00 per kW of on-peak billed demand.

Energy Charge: On-peak: \$0.0758 per kilowatt-hour (kWh).
Off-peak: \$0.0587 per kWh.

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be equal to the customer charge, plus the distribution demand charge.

Prompt Payment of Bills: Same as Rg-1.

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RATE FILE

Sheet No. 2 of 2

Schedule No. Cp-3

Amendment No. 72

Public Service Commission of Wisconsin**NORTHWESTERN WISCONSIN ELECTRIC COMPANY****Large Power Time-of-Day (continued)**Pricing Periods:

- On-peak: The on-peak hours shall be those hours designated by the utility's wholesale supplier as peak hours. They are 9:00 a.m. to 9:00 p.m. each day, Monday through Friday, inclusive, except for designated holidays. However, customers are allowed to choose 8:00 a.m. to 8:00 p.m. as the peak period. Once a customer selects one of these two peak periods, that customer has to stay on it for a minimum of one year.
- Off-peak: All times not specified as on-peak including all day Saturday and Sunday, and the following holidays; New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day; or the day nationally designated to be celebrated as such.

Determination of Maximum Measured Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatts-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month.

Determination of On-peak Billed Demand: When the Average Monthly Power Factor is equal to or greater than 90 percent, the On-peak Billed Demand shall be the On-peak Maximum Measured Demand.

When the Average Monthly Power Factor is less than 90 percent, the On-peak Maximum Demand shall be adjusted to obtain the On-peak Billed Demand. On-peak Billed Demand shall be determined each month by the following formula:

$$\text{On-Peak Billed Demand} = \frac{\text{On - peak Maximum Measured Demand} \times 90\%}{\text{Average Monthly Power Factor}}$$

The Average Power Factor is obtained by the following formula, where A = monthly use of kilowatt-hours and B = monthly use of lagging reactive kilovolt-ampere-hours as obtained from a reactive component meter. Any reactive component meter used shall be equipped with ratchets to prevent registration of leading Power Factor.

$$\text{Average Monthly Power Factor} = \frac{A}{\sqrt{A^2 + B^2}}$$

EFFECTIVE:

February 25, 2013

PSCW AUTHORIZATION:

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Public Service Commission of Wisconsin**NORTHWESTERN WISCONSIN ELECTRIC COMPANY****Large Power Conjunctive Metering Rider**

Application: This rider will apply to Cp-3 customers with multiple service entrances, which are separately metered, and whose combined measured maximum demand is in excess of 200 kilowatts, for three or more months in a consecutive 12 month period, and meets all of the appropriate provisions described below. The Cp-3 rates will apply to the following billing determinants.

Billing Determinants:

Determination of Customer Charges: The monthly customer charge will equal the Cp-3 customer charge times the number of individually metered locations; as if they were served individually.

Determination of Customer Demand: The customer demand will equal the sum of the customer demands for all metered locations; as if they were served individually.

Determination of Maximum Coincident Demand: The Maximum Coincident Demand in any month shall be the greatest demand, during the on-peak time period, resulting from the combination of all separately metered services, which occurs in any 15 consecutive minutes during each month.

Determination of On-peak Billed Demand: A customer, served on this rider, will be billed the On-peak Billed Demand as described below:

$$\text{On-Peak Billed Demand} = \frac{\text{Maximum Coincident Demand} \times 90\%}{\text{Average Monthly Power Factor}}$$

Determination of Average Monthly Power Factor: Same as Cp-3.

Determination of Energy Charge: Same as Cp-3, applied to all kWh.

Determination of PCAC: Same as Cp-3, applied to all kWh.

Determination of Minimum Monthly Bill: Same as Cp-3.

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RATE FILESheet No. 2 of 2Schedule No. Cp-4**Public Service Commission of Wisconsin**Amendment No. 72**NORTHWESTERN WISCONSIN ELECTRIC COMPANY****Large Power Conjunctive Metering Rider (continued)**General Provisions:

1. In order to qualify for conjunctive metering, the customer's building shall be a single contiguous premises not separated by any public right-of-way.
2. All customers served on the Cp-3 rate schedule must be notified annually that conjunctive metering is available upon request.
3. Utility will install the necessary metering equipment to allow conjunctive metering within a reasonable time.
4. The customer is responsible for the additional software/hardware needed to translate the individual metering or the purchase of any facilities to get to a common delivery point.
5. Customers who are conjunctive metered may terminate it upon written notice to the utility. The customer must be notified by the utility that he/she is responsible for any increases in bills that may result by eliminating conjunctive metering.

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RATE FILE

Sheet No.	1 of 5
Schedule No.	Cp-5
Amendment No.	72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Optional Large Power Controlled Time-of-Day

Application: Available on an optional basis to any Large Power Time-of-Day (Cp-3) customer who agrees to control sufficient demand to a predetermined level whenever required by the Company. General availability is restricted to Cp-3 customers with a minimum controllable demand of 50 kW. Service under this rate may be refused if the Company feels that the load to be controlled will not provide adequate load reduction when required.

Customer Charge: \$60.00 per month. (Same as Cp-3)

Distribution Demand Charge: \$1.50 per kW of the highest monthly maximum measured demand occurring in the current month or preceding 11-month period. (Same as Cp-3)

Firm Demand Charge: \$6.00 per kW of on-peak billed demand.

Controlled Demand Charge: \$3.00 per kW of on-peak billed demand.

Energy Charge: On-peak: \$0.0758 per kilowatt-hour (kWh).
Off-peak: \$0.0587 per kWh.

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be equal to the customer charge, plus the distribution demand charge.

Prompt Payment of Bills: Same as Rg-1.

Pricing Periods:

- On-peak: The on-peak hours shall be those hours designated by the utility's wholesale supplier as peak hours. They are 9:00 a.m. to 9:00 p.m. each day, Monday through Friday, inclusive, except for designated holidays. However, customers are allowed to choose 8:00 a.m. to 8:00 p.m. as the peak period. Once a customer selects one of these two peak periods, that customer has to stay on it for a minimum of one year.
- Off-peak: All times not specified as on-peak including all day Saturday and Sunday, and the following holidays; New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day; or the day nationally designated to be celebrated as such.

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NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Optional Large Power Controlled Time-of-Day (continued)

Determination of Maximum Measured Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatts-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month.

Determination of On-peak Billed Demand: When the Average Monthly Power Factor is equal to or greater than 90 percent, the On-peak Billed Demand shall be the On-peak Maximum Measured Demand.

When the Average Monthly Power Factor is less than 90 percent, the On-peak Maximum Demand shall be adjusted to obtain the On-peak Billed Demand. On-peak Billed Demand shall be determined each month by the following formula:

$$\text{On-Peak Billed Demand} = \frac{\text{On - peak Maximum Measured Demand} \times 90\%}{\text{Average Monthly Power Factor}}$$

The Average Power Factor is obtained by the following formula, where A = monthly use of kilowatt-hours and B = monthly use of lagging reactive kilovolt-ampere-hours as obtained from a reactive component meter. Any reactive component meter used shall be equipped with ratchets to prevent registration of leading Power Factor.

$$\text{Average Monthly Power Factor} = \frac{A}{\sqrt{A^2 + B^2}}$$

Predetermined Firm Demand: A predetermined firm demand level shall be specified and agreed to by the customer and the Company. The customer's adjusted on-peak billed demand in excess of the predetermined firm demand during control periods shall be subject to penalty as described in Terms and Conditions, Item 4.

Control Period: During a month, Control Periods are the periods during which a customer is requested to control demand to the predetermined level. If a Control Period occurs during off-peak hours, the demand shall be billed as if it had occurred during on-peak hours.

(Continued on next page)

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Optional Large Power Controlled Time-of-Day (continued)**Firm Billing Demand:

1. In months where no Control Period occurs, the firm billing demand period shall be the lesser of the predetermined Firm Demand or adjusted On-Peak Billed Demand.
2. In months where no control period occurs, the firm billing demand shall be the adjusted On-Peak Billed Demand established during the Control Period.
3. In months where more than one Control Period occurs and the customer has not exceeded predetermined Firm Demand level during any of the Control Periods, the average of the adjusted On-Peak Billed Demands established during the Control Periods shall be used for billing purposes.
4. In months where more than one Control Period occurs and the customer has exceeded predetermined Firm Demand levels during any control period, the Firm Billing Demand shall be the greatest adjusted On-Peak Billed Demand established during any Control Period.

Controlled Billing Demand: The Controlled Billing Demand shall be the difference between a customer's adjusted On-Peak Demand and Firm Billing Demand during the month. The Controlled Billing Demand shall be zero if the Firm Billing Demand is greater than the adjusted On-peak Demand in a month.

Terms and Conditions of Service:

1. The Customer shall control its own load to a predetermined level and the Customer MUST:
 - a. Provide to the Company a list of names of people designated as responsible for curtailment action of the Customer's loads and who will take calls from the Company on a 24-hour, seven-day-a-week, basis.
 - b. Provide a telephone jack at the point of metering.
 - c. Allow the Company use of existing telephone facilities at no cost to the Company.
 - d. Install remote control equipment provided by the Company, if requested by the Company to do so.
 - e. Provide a continuous 120 volt AC power source at the connection point for the operation of any Company remote control equipment.
 - f. Allow the Company to inspect and approve the remote control installation and equipment provided by the Customer.
 - g. Allow the Company to revise the type of control system selected by the Customer.

(Continued on next page)

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Optional Large Power Controlled Time-of-Day (continued)Terms and Conditions of Service: (Continued)

2. The Company MUST:
 - a. Provide to the Customer a list of names of those employees responsible for notifying customers of curtailment periods.
 - b. Maintain an official log of all calls notifying customers of curtailment periods. This information will include, but will not be limited to, the date and time of the call, the duration of the curtailment period, and the names of both the Customer designated person contacted and the Company employee making the contact.
3. Company will endeavor to give the Customer at least one hour's notice of an impending Control Period.
4. Service interruption under this rate option shall be at the discretion of the Company. The frequency of interruption will normally occur up to 20 days per calendar year, occurring at such times as when the Company expects to incur a system peak, or for area protection, and at such other times when, in the Company's opinion, the reliability of the system is endangered. The duration of an interruption will vary from two (2) hours up to about 16 hours. The total hours of interruption called for by this rate option shall not exceed 300 hours in a calendar year, excluding hours of interruption due to physical causes other than intentional curtailments executed by the Company.
5. If in any month a Customer fails to control load to predetermined Firm Demand level when requested to do so by the Company, an additional charge of \$15.00 per kW per occurrence shall be applied to the amount by which the Customer's maximum adjusted demand during any Control Period exceeds predetermined Firm Demand. If a Customer incurs three failures to control load to predetermined Firm Demand level when requested to do so by the Company, the Company reserves the right to renegotiate the predetermined demand level or remove the Customer from the Large Power Controlled Time-of-Day Service. Furthermore, the Customer must maintain a controllable load such that it provides adequate load reduction when required. If a Customer is removed from this service, the Customer will be subject to a cancellation charge, as specified in Terms and Conditions, Item 6.
6. The Customer shall execute an Electric Service Agreement with the Company which shall include:
 - a. A minimum of a rolling five-year term of service which includes a trial period subject to Terms and Conditions, Item 7.
 - b. The predetermined Firm Demand level shall be set on an annual basis, however, it may be revised and subject to approval by the Company.
 - c. Terms and conditions and other provisions.

(Continued on next page)

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Optional Large Power Controlled Time-of-Day (continued)**Terms and Conditions of Service: (Continued)

7. Cancellation Charge: If the customer terminates the Agreement during its term, or if the Agreement is terminated as a result of any default of the Customer, the Customer will pay to the Company the following Cancellation Charge:

Eighteen (18) times the demand charge differential multiplied by the Customer's average monthly controlled demand for the previous 12 months. If termination occurs less than 12 months after commencement of this Agreement and the Customer is not eligible for the trial period, the Customer's average monthly controlled demand will be computed based on the number of months of billing data available.
8. Trial Period: The Cancellation Charge described above will not apply if the Customer terminates the Agreement by notifying the Company in writing during the first 12 months of service. If the Customer terminates the Agreement during this period, the Customer will pay to the Company the sum of the following:
 - a. The total controlled demand during the term of Agreement times the difference between firm and controlled demand rates in effect during the term of the Agreement.
 - b. All Company installation and removal costs for special equipment and facilities provided by the Company for peak controlled time-of-day service. If the Customer has under estimated his predetermined Firm Demand level and requires an increase in the level to accommodate Firm load, the Customer will repay the Company that portion of past credits received which represent the difference between the initial and the newly requested level. A trial period for peak controlled time-of-day service will not be available for any customer who has previously received such service.
9. The Company shall not be liable for any loss or damage caused by, or resulting from, any interruption of service associated with this rate option.
10. The Company will determine, at a service location designated by the Company, the number of services supplied. Customers requesting special facilities will be charged the additional costs incurred for such facilities.

Public Service Commission of Wisconsin**NORTHWESTERN WISCONSIN ELECTRIC COMPANY****Voluntary Interruption Compensation Rate**

Application: This rate will be applied to any existing customer who will voluntarily interrupt firm load of 20 kW or more at the request of the Company during peak periods of electric use. The firm load shall be predetermined and agreed upon by the Company and the customer. The Voluntary Interruption Compensation Rate will be implemented as follows:

1. The Company will solicit customers regarding availability of the Voluntary Interruption Compensation Rate.
2. The Company will establish a database of potential firms and electric loads available on a voluntary basis for the rate.
3. At the Company's option it will solicit customers listed on the database during peak periods of electric use and offer market based compensation for voluntary interruption of the predetermined firm load for a specified period of time.
 - a. The Company will notify customers listed on the database one hour in advance of the specified period in which it is requesting a voluntary reduction. The Company will use the average kW established two hours prior to the notification of a voluntary reduction period as the customers firm demand level. This firm demand level will be used to confirm the reduction of the predetermined firm load.
 - b. Load Aggregation Requirement – Because of minimum market energy sale requirements of one megawatt-hour (MWh), customers who volunteer for the rate and have predetermined firm load to interrupt will be pooled with other customers to achieve the one MWh requirement.
4. The Company may choose not to exercise the request for voluntary load interruption if the Load Aggregation Requirement is not achieved.
5. If the Load Aggregation Requirement is achieved and customer voluntarily interrupts their predetermined firm load, customers will be compensated by the Company based on the Market Based Compensation calculation.
 - a. Market Based Compensation – The Company will make a reasonable effort to achieve the lowest market price available during the peak period. The Company will then pay customers this market price less 10% for voluntary reduction of predetermined firm load during that period.
6. Total Market based compensation to the customer will be the predetermined firm megawatt (MW) load multiplied by the Market Based Compensation calculation per MWh.
 - a. PCAC Calculation – The voluntary interruption compensation payments are considered a component of the Company's cost of power purchased.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Voluntary Interruption Compensation Rate (continued)**Terms and Conditions:

1. The Company must specify the length of the voluntary interruption and the Market Based Compensation rate prior to accepting voluntary interruption from a customer of the predetermined firm load.
2. A customer who fails to comply with the voluntary predetermined firm load reduction for the period specified will be charged as described below.
 - a. If the Company discovers the non-compliance during the specified control period and the Company cannot find one or more other customer(s) to voluntarily interrupt to make up the shortfall for the remainder of the control period, then the customer will be billed for the cost of additional MWh blocks for the remaining portion of the control period. The cost of the MWh block(s) will be priced to directly reflect the market price plus 10 percent for each hour remaining in the control period.
 - b. If the Company discovers the non-compliance after the specified control period (i.e. when the meter is downloaded for billing purposes) the customer will be billed the Company's costs as described herein. If the Company is billed by their wholesale supplier, MAPP, or any other authority for the shortfall during the specified control period, the customer must pay this shortfall whether it is billed in terms of energy cost or a fixed penalty. If there is no penalty to the Company from any of these entities but the Company discovered a non-compliance (the Company brought enough energy to cover the shortfall due to the lower than expected MWh needs during the control period) the customer will be billed two times the cost of the MWh blocks during the control period for the duration of the control period in which the customer was in non-compliance. The cost of the MWh blocks will be tied to the average cost of the MWh blocks purchased by the Company for non-firm energy during a control period.
3. Customer shall be responsible for interrupting their predetermined firm load during the voluntary control period. Customer must:
 - a. Provide to Company a list of names of people designated as responsible for volunteering to interrupt their predetermined firm load.
 - b. Provide telephone jack at point of metering.
 - c. Allow Company use of existing telephone facilities at no cost to the Company.
 - d. Customer is responsible for any additional costs associated with the electronic metering/monitoring equipment necessary to implement this rate.

(Continued on next page)

RATE FILESheet No. 3 of 3Schedule No. Cp-6**Public Service Commission of Wisconsin**Amendment No. 72**NORTHWESTERN WISCONSIN ELECTRIC COMPANY****Voluntary Interruption Compensation Rate (continued)**Terms and Conditions: (continued)

4. Company must provide to customer an authorized list of employees responsible for requesting voluntary interruption.
5. Company must maintain a log of all calls requesting voluntary interruption. The information will include but not be limited to the date and time of the call, the duration of the voluntary interruption period, and the names of the people contacted.
6. The Company will endeavor to make voluntary interruption requests an hour in advance.

EFFECTIVE:

February 25, 2013

PSCW AUTHORIZATION:

Order in Docket 4280-ER-105, Mailed February 21, 2013

Public Service Commission of Wisconsin**NORTHWESTERN WISCONSIN ELECTRIC COMPANY****Contract Service Rate**

Application: This rate will be offered to existing customers of all types of service if their monthly Maximum Measured Demand is in excess of 200 kilowatts (kW) per month for three or more months in a consecutive 12-month period. Service under this schedule is available to any individual customer:

1. Who has contracted with the Company for a rate that uses market-based pricing options in order to receive market benefits and take market risks for the purchases of capacity and/or energy and has had rate approved by the Public Service Commission of Wisconsin.
2. Who has cooperated with the Company in developing an economic analysis that demonstrates that the contractual rate structure and rate level will not harm shareholders of the Company or other customers of the Company.
3. Who is willing to abide by all terms of the Company's appropriate electric service schedules and riders except where modified by tariff or by Commission approved contract.

Terms and Conditions:

1. Service under this schedule requires a written contract between the Company and the customer. Said contract must be filed with and approved by the Commission. Any amendments to the executed contract must also be filed with and approved by the Commission.
2. The contract term shall be specified.
3. Required guidelines are listed below:
 - a. The Company must respond within thirty (30) days of the initial receipt of a request by a customer for a market-based rate, and within thirty (30) days of subsequent proposals. The proposal must include cost data to justify its definition as a market-based rate.
 - b. The Company's rejection of a customer proposal must be accompanied by an analysis detailing specific problems with the proposal, or a counter proposal. Some of the specific problems could be that the proposed rate would:
 - 1) Harm other customers of the Company who are not subject to the rate
 - 2) Harm the shareholders of the Company, or
 - 3) Not subject the Customer to market risks.
4. Other Terms and Conditions as agreed upon by Company and customer.

RATE FILE

Sheet No. 1 of 1

Schedule No. Ms-1

Amendment No. 72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Street Lighting Service

Application: This schedule will be applied to any municipality within the company's service territory who accepts to contract with the company for multiple brackets and/or suspension street lighting. The street lighting system shall be furnished, serviced and maintained by the company.

Rate: Dusk to Dawn Schedule

Investment charge:

175 Watt Mercury Vapor:	\$6.00 per lamp per month net.
100 Watt Sodium Vapor:	\$6.00 per lamp per month net.
250 Watt Sodium Vapor:	\$7.50 per lamp per month net

Energy Charge: \$0.0882 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Minimum Charge: To be based upon special consideration and terms of street lighting contracts entered into by municipalities and the company.

Prompt Payment of Bills: Same as Rg-1.

This rate schedule is closed to new mercury vapor lights.

Special Terms and Provisions:

1. All lamp renewals shall be made by the company. Lamps on the dusk to dawn schedule shall burn for approximately 30 minutes after sunset until approximately 30 minutes before sunrise. Service under this rate is for the exclusive use of the customer and is not to be resold or shared with others.
2. The kWh-consumed by each lamp is determined by the following:
Mercury Vapor: Metering one lamp of each lamp size and type and apply this to lamps of the same size.
Sodium Vapor: Metering one lamp of each lamp size and type and apply this to lamps of the same size.
3. It is the customer's responsibility to report all outages of lighting fixtures and obstructions such as trees, branches and the like from allowing the light to be properly distributed from the lighting fixture. If the company shall permit said lighting to remain out of repair or inoperative for a period longer than 48 hours after being notified, no charge shall be billed thereon while idle.

EFFECTIVE: February 25, 2013

PSCW AUTHORIZATION: Order in Docket 4280-ER-105, Mailed February 21, 2013

RATE FILE

Sheet No. 1 of 1

Schedule No. Ms-2

Public Service Commission of Wisconsin

Amendment No. 72

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Street Lighting Service

Application: This schedule will be applied to any municipality within the company's service territory who contracts with the company for street lighting service. The street lighting system will be owned and maintained by the customer. In the event that the company maintains the system, the customers will reimburse the company with the costs.

Energy Charge: \$0.0903 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see schedule PCAC.

Minimum Charge: To be based upon special consideration and terms of street lighting contracts entered into by municipalities and the company.

Prompt Payment of Bills: Same as Rg-1.

Special Terms and Provisions:

1. The customer is responsible for the payment of the cost of all lamp renewals and maintenance.
2. Ornamental or decorative lighting shall be metered and billed on this rate.

RATE FILE

Sheet No. 1 of 1

Schedule No. Y1-1

Amendment No. 72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Yard Lighting

Application: This rate will be applied to any customer within the company's service territory who contracts with the company for yard lighting service. The fixture will be furnished and maintained by the company.

Rate: Dusk to Dawn Schedule.

175 Watt Mercury Vapor:	\$6.00 per lamp per month net.
100 Watt Sodium Vapor:	\$6.00 per lamp per month net.
250 Watt Sodium Vapor:	\$7.50 per lamp per month net

Energy Charge: \$0.0882 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see Schedule PCAC.

Prompt Payment of Bills: Same as Rg-1.

This rate will be closed to new mercury vapor lights.

Special Terms and Provision:

1. All lamp renewals shall be furnished and installed by the company. Service under this rate is for the exclusive use of the customer and is not to be resold or shared with others.
2. The fixture shall be mounted on company pole or customer meter pole. Where neither company pole nor customer meter pole are available, then customer shall furnish pole for mounting of fixture.
3. It is the customer's responsibility to report all outages of lighting fixtures and obstructions such as trees, branches and the like from allowing the light to be properly distributed from the lighting fixture. If the company shall permit said lighting fixture to remain out of repair or inoperative for a period longer than 48 hours after being notified, no charge shall be billed thereon while idle.

EFFECTIVE:

February 25, 2013

PSCW AUTHORIZATION:

Order in Docket 4280-ER-105, Mailed February 21, 2013

RATE FILE

Sheet No.	1 of 3
Schedule No.	W-1
Amendment No.	72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Wholesale Rate – Centuria Municipal Electric Utility

Application: This rate will be applied to Centuria Municipal Electric Utility. Energy furnished under this rate will be three-phase alternating current delivered at a nominal voltage of 7200/12460 volts, and at a nominal frequency of sixty (60) cycles per second.

The customer may be served at more than one Purchase Point. If Purchase Points are within one-half mile of one another, the customer shall be charged a single Customer charge and billing determinants shall be calculated using Conjunctive Metering methodology.

Customer Charge: \$60.00 per month.

Distribution Demand Charge: \$1.50 per kW of the highest monthly Maximum Measured Demand occurring in the current month or preceding 11-month period.

Demand Charge: \$6.00 per kW of on-peak billed demand.

Energy Charge: On-peak: \$0.0748 per kilowatt-hour (kWh).
Off-peak: \$0.0582 per kWh.

Power Cost Adjustment Clause: Charge per all kWh, varies monthly, see Schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be equal to the customer charge, plus the distribution demand charge.

Prompt Payment of Bills: Same as Rg-1.

Determination of Maximum Measured Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatts-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month.

If multiple Purchase Points less than on-half mile apart are used, the Maximum Measured Demand shall be equal to the Maximum Coincident Demand.

On-peak Maximum Demand: The On-peak Maximum Demand shall be the Maximum Measured Demand that occurs during the On-peak period.

(Continued on next page)

EFFECTIVE:	February 25, 2013
PSCW AUTHORIZATION:	Order in Docket 4280-ER-105, Mailed February 21, 2013

RATE FILE

Sheet No.	2 of 3
Schedule No.	W-1
Amendment No.	72

Public Service Commission of Wisconsin

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Wholesale Rate - Centuria Municipal Electric Utility

Determination of On-Peak Maximum Coincident Demand: The On-Peak Maximum Coincident Demand in any month shall be the greatest demand, during the on-peak time period, resulting from the combination of all separately metered Purchase Points, less than one-half mile apart, which occurs in any 15 consecutive minutes during each month.

Determination of Maximum Coincident Demand: The Maximum Coincident Demand in any month shall be the greatest demand resulting from the combination of all separately metered Purchase Points, less than one-half mile apart, which occurs in any 15 consecutive minutes during each month.

Pricing Periods:

On-peak:	9:00 a.m. to 9:00 p.m., Monday through Friday, excluding Holidays, specified below.
Off-peak:	All times not specified as on-peak including all day Saturday and Sunday, and the following holidays; New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day; or the day nationally designated to be celebrated as such.

Determination of Distribution Demand: The Distribution Demand shall be equal to the sum of the highest monthly Maximum Measured Demands occurring in the current month or preceding 11-month period at each Purchase Point more than one-half mile apart. For Purchase Points less than one-half mile apart, the Distribution Demand shall be equal to the greatest Maximum Coincident Demand occurring in the current month or preceding 11-month period.

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RATE FILE

Sheet No.	3 of 3
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Public Service Commission of Wisconsin**NORTHWESTERN WISCONSIN ELECTRIC COMPANY****Wholesale Rate - Centuria Municipal Electric Utility**

Determination of On-Peak Billed Demand: When the Average Monthly Power Factor is equal to or greater than 90 percent and Purchase Points are more than one-half mile apart, the On-Peak Billed demand shall be the On-Peak Maximum Measured Demand. When the Average Monthly Power Factor is equal to or greater than 90 percent and Purchase Points are less than one-half mile apart, the On-Peak Billed demand shall be the On-Peak Maximum Coincident Demand.

When the Average Monthly Power Factor is less than 90 percent and Purchase Points are more than one-half mile apart, On-peak Billed Demand shall be determined each month by the following formula:

$$\text{On-Peak Billed Demand} = \frac{\text{On-Peak Maximum Demand} \times 90\%}{\text{Average Monthly Power Factor}}$$

When the Average Monthly Power Factor is less than 90 percent and multiple Purchase Points are less than one-half mile apart, On-Peak Billed Demand shall be calculated as follows:

$$\text{On-Peak Billed Demand} = \frac{\text{On - Peak Maximum Coincident Demand} \times 90\%}{\text{Average Monthly Power Factor}}$$

The Average Monthly Power Factor is obtained by the following formula, where A = monthly use of kilowatt-hours and B = monthly use of lagging reactive kilovolt-ampere-hours as obtained from a reactive component meter. Any reactive component meter used shall be equipped with ratchets to prevent registration of leading Power Factor.

$$\text{Average Monthly Power Factor} = \frac{A}{\sqrt{A^2 + B^2}}$$

EFFECTIVE:

February 25, 2013

PSCW AUTHORIZATION:

Order in Docket 4280-ER-105, Mailed February 21, 2013

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Other Charges and Billing Provisions**

Budget Payment Plan: A budget payment plan, which is in accordance with Wis. Admin. Code ch. PSC 113, is available from the utility. The utility does not use a fixed budget year. The utility will calculate the monthly budgeted amount by spreading the estimated annual bill over eleven months, with the last month consisting of any end of year adjustments.

Reconnection Billing: All customers whose service is disconnected in accordance with the disconnection rules as outlined in Wis. Admin. Code ch. PSC 113, shall be required to pay a reconnection charge. The charge shall be **\$45.00** during regular office hours. After regular office hours the minimum reconnection charge of **\$45.00** applies plus any overtime labor costs, not to exceed a total maximum charge of **\$85.00**.

Reconnection of a Seasonal Customer's Service: Reconnection of a service for a seasonal customer who has been disconnected for less than one year shall be subject to the same reconnection charges outlined above. A seasonal customer shall also be charged for all minimum bills that would have been incurred had the customer not temporarily disconnected service.

Insufficient Fund Charge: A **\$20.00** charge will be applied to the customer's account when a check rendered for utility service is returned for insufficient funds.

Average Depreciated Embedded Cost: The embedded cost of the distribution system (excluding the standard transformer and service facilities), for each customer classification, is determined based on methodology authorized by the Public Service Commission of Wisconsin, and described in the utility's Electric Rules. The average depreciated embedded cost by customer classification is as follows:

Residential Service (Urban, Rural, and Farm): **\$646.00**.

Apartment and Rental Units Separately Metered: **\$646.00** per unit metered.

Subdividers and Residential Developers: **\$646.00** per unit.

General Service: (Including Multi-Unit Dwellings If Billed on One Meter): **\$1282.00**.

Power Service: **\$148.00** per kW (Cp-1 and Cp-2) and **\$108.00** per kW (Cp-3, Cp-4, and Cp-5) of average billed demand.

Street Lighting: **\$6.00**.

(Continued on next page)

RATE FILE

Sheet No. 2 of 2

Schedule No. OC-1

Public Service Commission of Wisconsin

Amendment No. 72

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Other Charges and Billing Provisions

Charges for New Accounts, Changes, Meter Reading, Meter Installation, and Meter Testing:

No charge will be made for a new account, or for changing an existing account to a new customer.

A charge of **\$35.00** will be made for reading a meter or meters at one service location for a change in customers on an account, or at an existing service, on a date other than the regularly scheduled date to do so.

No charge will be made to install a meter, or activate, at an existing service.

A charge of **\$27.00** will be made to remove, or deactivate, a meter at an existing service at the request of a customer or landlord.

A charge of **\$45.00** will be made to a customer who requests a meter test at an interval of less than 24 months since the last requested meter test if the meter is found to be registering accurately.

Charge for Temporary Service:

A maximum charge of **\$247.00** shall be made for installation of a Temporary Service as identified in Section 113 of the utilities Service Rules.

EFFECTIVE:

February 25, 2013

PSCW AUTHORIZATION:

Order in Docket 4280-ER-105, Mailed February 21, 2013

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Parallel Generation (20 kW or less) -- Net Energy Billing**1. Effective In

All territories served by the utility.

2. Availability

Available for single-phase and three-phase customers where a part or all of the electrical requirements of the customer are supplied by the customer's generating facilities, where such facilities have a total generating capability of 20 kW or less, where such facilities are connected in parallel with the utility and where such facilities are approved by the utility.

3. Rate

The customer shall be billed monthly on a net energy basis and shall pay the fixed charge and energy charge specified in the rate schedule under which he is served. If, in any month, the customer's bill has a credit balance of \$25 or less, the amount shall be credited to subsequent bills until a debit balance is reestablished. If the credit balance is more than \$25, the utility shall reimburse the customer by check upon request. Monthly credits shall be computed by taking the net excess kilowatt-hours produced times the sum of the applicable energy charge plus monthly power cost adjustment clause (PCAC).

4. Metering and Services Facilities

A customer who is served under a regular rate schedule shall have any ratchet and/or other device removed from his meter to allow reverse power flow and measurement of net energy used. Customers eligible for net energy billing but with existing metering facilities equipped with ratchets or other devices preventing reverse registration (i.e. time-of-use metering facilities) may request that the utility install the necessary metering to permit such billing.

5. Customer Obligation

See Pgs-2 Sections 10 and 11.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Customer-Owned Generation Systems (Greater than 20 kW)**1. Effective In

All territories served by the utility

2. Availability

Available for single-phase and three-phase customers where a part or all of the electrical requirements of the customer are supplied by the customer's generating facilities, where such facilities have a total generating capability of greater than 20 kW and less than or equal to 100 kW, where such facilities are connected in parallel with the utility. Customers not desiring to sell energy under this rate have the right to negotiate a buy-back rate.

The energy rate indicated below is the minimum for electrical energy. Customers with generating facilities greater than 100 kW can negotiate a buy-back rate. Should the utility be unwilling to pay the minimum rate for electrical energy, the utility shall agree to transport such electrical energy to another utility that will pay such minimum rate. The utility shall recover actual costs of such transportation from the generating customer.

3. Rate

Customers shall receive monthly payments for all electricity delivered to the utility and shall be billed by the utility for metering and associated billing expenses specified in the latest rates of the wholesale supplier unless the latest rates of the wholesale supplier do not properly reflect avoided costs. In such event, the Commission, upon request, may determine appropriate rates. The utility shall have on file a copy of the latest customer-owned generation system rates for its wholesale supplier.

4. On-Peak and Off-Peak Hours and Holidays

On-peak and off-peak hours and holidays are those specified in the wholesale suppliers latest rates.

5. Minimum Charge

The monthly minimum charge paid by the customer shall be the customer charge.

6. Power Factor

The customer shall operate on a net power factor of not less than 90 percent.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Customer-Owned Generation Systems (Greater than 20 kW) continued****7. Negotiated Rates**

Customers with generation systems greater than 100 kW can negotiate a buy-back rate.

Customers with generation systems greater than 20 kW and less than or equal to 100 kW have the right to negotiate a buy-back rate. The buy-back rate cannot be greater than the full avoided cost.

The following are the required procedure guidelines:

- a. The utility must respond to the customer-owned generating system within 30 days of the initial written receipt of the customer-owned generating system proposal and within 30 days of receipt of a subsequent customer-owned generating system proposal,
- b. The utility's rejection of the customer-owned generating system proposal must be accompanied by a counter-offer relating to the specific subject matter of the customer-owned generating system proposal, and
- c. If the utility is unable to respond to the customer-owned generating system proposal within 30 days it shall inform the customer-owned generating system of:
 - 1) Specific information needed to evaluate the customer-owned generating system proposal.
 - 2) The precise difficulty encountered in evaluating the customer-owned generating system proposal.
 - 3) The estimated date that it will respond to the customer-owned generating system proposal.
- d. The Commission may become involved in the utility negotiations upon showing by either utility or the customer-owned generating system that a reasonable conclusion cannot be reached under the above guidelines. The Commission may provide a waiver to the guidelines and order new negotiation requirements so that a reasonable conclusion can be reached.
- e. A copy of all negotiated buy-back rates shall be sent to the Commission. These rates shall not be effective until the contract is placed on file at the Commission.

8. Charges for Energy Supplied by the Utility

Energy supplied by the utility to the customer shall be billed in accordance with the standard applicable rate schedules of the utility.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Customer-Owned Generation Systems (Greater than 20 kW) continued9. Maintenance Rate

A customer-owned generation facility may be billed lower demand charges for energy purchased during scheduled maintenance provided written approval is obtained in advance from the utility. Demand charges other than "Customer Demand" shall be prorated if maintenance is scheduled such that the utility does not incur additional capacity costs. Said probation shall be the demand charge times the number of authorized days of scheduled maintenance divided by the number of days in the billing period.

10. Contract Required

A contract is required between the utility and the customer-owned generation facility. The contract shall specify safety, system protection, and power quality rules that generators must comply with. The contract shall require a minimum of \$100,000 liability insurance or proof of financial responsibility for the customer-owned generation system. Contracts with customer-owned generation facilities selling energy under the standard (non-negotiated) rate have no specific term or length. Contracts with customer-owned generation facilities selling energy under a negotiated rate shall contain performance requirements and be of sufficient length to ensure the utility avoids the costs for which the customer-owned generation facility has been paid.

11. Customer Obligationa. Metering Facilities

The customer shall furnish, install and wire the necessary service entrance equipment, meter sockets, meter enclosure cabinets, or meter connection cabinets that may be required by the utility to properly meter usage and sales to the utility.

b. Interconnection Costs

The owner of the generating facility shall be required to pay all interconnection costs, including metering, incurred by the utility. The owner shall pay said costs, including financing costs, within two years of the installation date of the interconnection facilities.

c. Liability Insurance

The owner of the generating facility shall be required to have liability insurance on the generating facility of at least \$100,000 or be able to prove financial responsibility.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

Customer-Owned Generation Systems (Greater than 20 kW) continuedd. Interconnection and Operation (Safety and Power Quality) Requirements

Electric Service to a customer-owned electric generation installation may be disconnected for failure to comply with these requirements.

- 1) Interconnection of a generating facility with the utility system shall not be permitted until application has been made to and approval received from the electric utility. The utility may withhold approval only for good reason such as failure to comply with applicable utility or governmental rules or laws. The utility shall require a contract specifying reasonable technical connection and operating aspects for the parallel generating facility.
- 2) The utility may require that for each generating facility there is provided between the generator or generators and the utility system, a lockable load-break disconnect switch. For installations interconnected at greater 600 volts a fused cutout switch may be substituted, where practicable. The switches shall be accessible to the utility for the purpose of isolating the parallel generating facility from the utility system when necessary.
- 3) The utility shall require a separate distribution transformer for a customer having a generating facility where necessary, for reasons of public and employee safety or where the potential exists for the generating facility causing problems with the service of other customers. Ordinarily the requirement should not be necessary for an induction-type generator with a capacity of 5 kW or less, or other generating units of 10 kW or less that utilize line-connected inverters.
- 4) Where necessary, to avoid the potential for a facility causing problems with the service of other customers, the utility should limit the capacity and operating characteristics of single-phase motors. Ordinarily single-phase generators should be limited to a capacity of 10 kW or less.
- 5) The utility shall require that each generating facility have a system for automatically isolating the generator from the utility's system upon loss of the utility supply, unless the utility desires that the local generation be continued to supply isolated load. For synchronous and induction generators such protection against continued operation when isolated from the utility system will ordinarily consist of over-current protection, fuse or circuit breaker, plus a voltage or frequency controlled contractor which would automatically disconnect the unit whenever its output voltage or frequency drifted outside predetermined limits, such as plus or minus 10 percent of the rated values.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Customer-Owned Generation Systems (Greater than 20 kW) continued**

Other suitable protective systems against abnormal voltages of frequencies may be accepted by the utility.

- 6) The utility shall require that the customer discontinue parallel generation operation when it so requests and the utility may isolate the generating installation from its system at times:
 - a) When considered necessary to facilitate maintenance or repair of utility facilities.
 - b) When considered necessary during system emergencies.
 - c) When considered necessary during such times as the generating facility is operating in a hazardous manner, or is operating such that it adversely affects service to other customers or to nearby communication systems or circuits.
- 7) The owner of the generating facility shall be required to make the equipment available and permit entry upon the property by electric and communication utility personnel at reasonable times for the purposes of testing isolation and protective equipment, and evaluating the quality of power delivered to the utility's system; and testing to determine whether the local generating facility is the source of any electric service or communication systems problems.
- 8) The power output of the generating facility shall be maintained such that the frequency and voltage are compatible with normal utility service and do not cause that utility service to fall outside the prescribed limits of Commission rules and other standard limitations.
- 9) The generating facility shall be operated so that variations from acceptable voltage levels and other service impairing disturbances do not result in adverse effects on the service or equipment of other customers, and in a manner that does not produce undesirable levels of harmonics in the utility power supply.
- 10) The owner of the generating facility shall be responsible for providing protection for the owner's installation equipment and for adhering to all applicable national, state and local codes. The design and configuration of certain generating equipment such as that utilizing line-commutated inverters sometimes requires an isolation transformer as part of the generating installation for safety and for protection of generating facilities.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**Customer-Owned Generation Systems (Greater than 20 kW) continued**12. Utility Obligationa. Metering Facilities

The utility shall install appropriate metering facilities to record all flows of energy necessary to bill in accordance with the charges and credits of the rate schedule.

b. Notice to Communication Firms

Each electric utility shall notify telephone utility and cable television firms in the area when it knows that customer-owned generating facility is to be interconnected with its system. This notification shall be as early as practicable to permit coordinated analysis and testing in advance of interconnection, if considered necessary by the electric or telephone utility or cable television firm.

13. Right to Appeal

The owner of the generating facility interconnected or proposed to be interconnected with a utility system may appeal to the Commission should any requirement of the utility service rules filed in accordance with the provisions of Wis. Admin. Code § PSC 113.70, or the required contract be considered to be excessive or unreasonable. Such appeal will be reviewed and the customer notified of the Commission's determination.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES

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*See Wis. Admin. Code ch. PSC 113.

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EFFECTIVE:

January 1, 2012

PSCW AUTHORIZATION:

Order in Docket 4280-ER-105, Mailed December 29, 2011

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES**

All agreements for service shall be for a period of one year unless otherwise specified in the contract. Contracts are automatically renewed at the end of their term under conditions stated in the contract.

No agent or employee of the utility shall have the power to, or shall amend, modify, alter, or waive any of the rates or rules of the utility or bind the utility by making any representation not incorporated in the contract.

Contracts shall not be transferred unless authorized by the utility; new occupants of premises previously receiving service must make official application to the utility before commencing the use of service.

Customers who have been receiving service must notify the utility when discontinuing service; otherwise, they will be liable for the use of the service by their successors should said successors refuse to pay.

101.2 Definitions and Classification of Customers

An electric customer or unit of service shall consist of any contiguous aggregation of space or area occupied for a distinct purpose such as a residence, apartment, flat, store, farm, office, factory, etc., which is equipped with one or more fixtures for rendering service separate and distinct from other users. The public portions of buildings, such as hallways, toilets, etc., may be treated separately depending on the requirements.

Unless otherwise defined, the ultimate use of energy purchased by the customer(s) determines the rate schedule applicable to their installation. Electric customers in general may be classified as follows:

- Residential Customers
- General Service Customers
- Power Service Customers
- Public Street and Highway Lighting Customers
- Rural Customers

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES101.2 Definition and Classification of Customers (continued)101.2a Residential Customers

A residential customer is defined to include each separate house, apartment, flat or other living quarters occupied by a person or persons constituting a distinct household and using energy for general household purposes. Lighting use may be extended to include the use of energy for lighting the land and buildings which are adjacent to, connected with, and used exclusively by the residence being served. Each dwelling in a multi-unit building constructed after March 1, 1980 (or constructed before March 1, 1980, and converted to a multi-unit use after March 24, 1987) shall have installed a separate electric meter for each such dwelling or unit. U

101.2b General Service Customers

A general service customer is defined to include each separate business enterprise, occupation or institution, taking service through a single meter, occupying for its exclusive use any unit or units of space such as an entire building, entire floor, suite of rooms or a single room, and using energy for general purposes as the schedule of rates applicable to the particular installation may permit. Each dwelling in a multi-unit building constructed after March 1, 1980 (or constructed before March 1, 1980, and converted to multi-unit use after March 24, 1987) shall have installed a separate electric meter for each unit. U

If the customer uses service for both residential and commercial purposes, the customer shall be classified as a commercial customer if the commercial usage is more than 10 percent of the customer's total usage. U

101.2c Power Service Customers

A power service customer is defined to include each residence, separate business enterprise or institution occupying for its exclusive use, any unit or units of space, such as an entire building, entire floor, suite of rooms or a single room, and using energy for driving motors or other electrical loads larger than permitted on the utility's other rate schedules.

101.2d Public Street and Highway Lighting Customers

A public street or highway lighting customer is defined to include governmental agencies that take service for the purpose of lighting public streets, highways or traffic signs.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****101.2e** Definition of Rate Areas**(1)** Urban Rate Area

The urban rate area shall be the area served within the city limits and any area circumscribed by an 800-foot diameter circle contiguous to the city limits or other urban rate area that contains 6 or more permanent delivery locations. Each delivery point shall be taken as the location of the termination of the utility-owned conductors on the customer's premises-- usually the support of the service wires on the customer's building.

The boundaries of an existing urban rate area are expanded to include permanent single-phase rural customers adjacent to an urban rate area when the number of customers (Delivery locations, not number of meters) served within a circle having a diameter of 800 feet or more, is six or more. A customer located outside of the urban rate area who in the opinion of the Company can be served from secondary distribution system may also be served at the urban rate.

(2) Farms

Any farm located within the urban rate area shall be served under the rural service rate.

101.3 Application of Rates and Combined Metering

The schedules of rates apply when electricity is furnished in any month to one customer at one location for a class of service through one meter. The schedules of rates are based on delivery and billing service to the ultimate user for retail service and do not permit resale or distribution.

For all extensions of new or increased service, each unit must be separately metered before service will be rendered.

For installations existing before March 1, 1980, such as an apartment or multiple residential unit where it is customary to include electric service with the rent or combine all service on one meter, it may be billed on the residential or commercial rate at the option of the customer. If billed on the residential rate, each apartment or unit, occupied or unoccupied, will be considered as a separate unit in determining the basis for billing. For every four apartments or residential units or fraction thereof in the building, one fixed charge shall be applied. Janitor's quarters will be classed as an apartment. U

Where a customer occupies more than one unit of space, each unit will be metered separately and a separate bill will be computed and rendered based on the readings of each individual meter unless a customer makes arrangements with a utility to provide the approved circuits and loops by which the different units can be connected and all energy metered through one meter.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES101.3 Application of Rates and Combined Metering (Continued)

Where a commercial and one or more residential units are combined so as to obtain electric service through one meter, the general service rate will be applied.

101.4 Availability of Service Voltages

Service may be taken at the following service voltages:

Singe-phase	120 volt 2 wire 120/240 volt 3 wire
Three-phase	120/208 volt 4 wire-wye 120/240 volt 4 wire-delta 277/480 volt 4 wire-wye
Closed to New Customers	
Three-phase	240 volt 3 wire-delta 480 volt 3 wire delta

Other specific voltages may be available, if approved by the utility.

101.5 Dual Voltages

If a customer requires service at a voltage other than that offered by the utility or at more than one voltage, the customer shall furnish and maintain the additional equipment required. If the customer's service requires two or more transformer settings or points of delivery to a structure, the customer shall also furnish and maintain the additional equipment required.

101.6 Emergency Systems

Where emergency systems in buildings are so wired as to require a separate meter, the energy so metered will be billed as a separate customer. Emergency systems are systems supplying power and illumination essential to safety, life and property where such systems or circuits are legally required by municipal, state, federal or other codes, or by any governmental agency having jurisdiction.

Emergency illumination shall include only the required exit lights and other lights specified as necessary to provide sufficient illumination.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES102 OTHER PROVISIONS102.1 Reconnection Billing (See Schedule OC-1)102.2 Reconnection of a Seasonal Customer's Service

Reconnection of a service for a seasonal customer who has been disconnected for less than one year shall be subject to the same reconnection charges outlined above. A seasonal customer shall also be charged for all minimum bills which would have been incurred had the customer not temporarily disconnected service.

102.3 Charges for New Accounts, Changes, Meter Reading, Meter Installation and Meter Testing (See Schedule OC-1)102.4 Billing for Fractional Month Service

When a customer commences or discontinues service between regular monthly meter reading dates, the utility will bill the customer as follows: **U**

- a. When a customer discontinues service ten (10) days or less from the previous month's meter reading date, the consumption will be included in the following month's billing.
- b. When a customer commences service ten days or less from the following month's meter reading, the consumption will be included in the following month's billing.
- c. When a customer commences service more than ten (10) days before the month's regular meter reading or discontinues service more than ten (10) days after the previous month's meter reading, the service will be billed as regular monthly service.

102.5 Continuity of Service

The Company uses reasonable care to provide a continuous and regular supply of service to its customers. It does not assume responsibility for losses, injuries or damages resulting from use of service, or as a result of interruption or variation in service. **U**

The company may curtail or temporarily interrupt the customer's service when necessary to make repair, replacement or changes in the utility's facilities either on or off the customer's premises.

The utility will make an effort to notify its customers of a planned interruption of service in advance.

102.6 Charge for Returned Checks (See Schedule OC-1)

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****102.7 Overbilling of Customers**

In the event the utility becomes aware of an overbilling of a customer, the utility shall promptly correct the billing error and notify the customer of the circumstances surrounding the overbilling. The utility shall then determine the time period during which the overbilling occurred. In making this determination, the utility shall apply Public Service Commission of Wisconsin rules and utility rules and tariffs.

Once the utility has determined the period of overbilling, the utility shall calculate the amount that it has overbilled the customer. The utility shall then make a refund to the customer of the amount of the overbilling, together with interest as calculated pursuant to Wis. Admin. Code ch. PSC 113.

Except as otherwise provided in Wis. Admin. Code ch. PSC 113, the maximum refund to the customer shall be for a time period not to exceed six years from the date the overbilling was discovered pursuant to Wis. Stat. § 893.93(1)(a).

All overbilling disputes arising under this section shall be taken to the PSC for resolution.

103 DEFINITION OF DISTRIBUTION AND SERVICE FACILITIES**103.1 Overhead Service Drop**

The overhead service drop is the overhead wire between the last pole or other aerial support of the distribution system and the point of attachment to the customer's service entrance equipment. It is normally located over the customer's property.

103.2 Underground Service Lateral

The underground service lateral is the underground service wire between the distribution system, including any risers at a pole or other structure, and the service entrance equipment. It is normally located on the customer's property.

103.3 Distribution Facilities

All primary and secondary voltage wire or cable and its supports, trenches, connection equipment, enclosures, and control equipment which is used to extend the distribution system from existing facilities to a point of connection with the service facilities. The cost of right-of-way preparation and restoration to the original condition, where appropriate, shall be included in the cost of distribution facilities.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES103.4 Underground Service Extension

Consists of an underground service lateral and necessary distribution line, if any. In no case shall it consist of separate segments of underground construction separated by overhead construction. The length of each underground service extension shall be the length of the cable route from the beginning of the trench to the point of termination at the applicant's service facilities.

103.5 Service Entrance Equipment

Consists of the meter socket and related overhead masthead or conduit for underground service. This equipment is provided by the customer and is generally located on or in the customer's building.

103.6 Service Facilities

The service facilities include the standard transformer, standard overhead service drop or standard underground service lateral and standard meter.

104 UTILITY FACILITIES ON CUSTOMER'S PREMISES

This rule shall apply to the distribution facilities required to service either a group of customers in multi-tenancy premises or a single customer where, in either case, the utility finds that it is necessary to install portions of such facilities on the premises being served. Such customer or property owner, when requested by the utility, shall make provision on their property for the installation of utility-owned facilities required for service(s) in accordance with the following:

Utility facilities shall consist of those which, in the opinion of the utility, are necessary to furnish adequate service at the utility-owned junction boxes on or adjacent to the enclosure of the utility substation or at customer-owned service entrance facilities. The utility will not supply wiring in or on a building beyond the junction box or on a building beyond the service entrance facilities. The utility will design such installations and will install facilities, which in its opinion are most economical or feasible to the utility, under the conditions met. At each installation the utility shall have the option of extending its primary conductors to two or more substations conveniently located with respect to the customers to be served or to furnish service to all customers from the substation. Where the utility's installation is located in a property owner's building, the applicable provisions of the Wisconsin State Electrical Code shall be observed.

A customer or property owner shall furnish, own and maintain the necessary indoor conduits, indoor or outdoor enclosures, vaults, building structural supports and accessories as specified by the utility.

If a customer or property owner requests any changes in the plan proposed by the utility, the customer shall pay the utility the estimated excess cost of the substituted installation. The utility shall require that these costs be paid in advance of construction.

105 CUSTOMERS' RESPONSIBILITY FOR UTILITY'S EQUIPMENT

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES

The customer shall be responsible for all damage to the utility's equipment, and for all loss resulting from interference or tampering therewith, caused by the customer or the customer's permittees, including compensation for consumed energy not recorded upon the meter. (See Wis. Admin. Code ch. PSC 113.)

Meters, service entrance switches, and service entrance outlets are sealed by the utility and such seals shall not be broken or tampered with in any manner without the consent of the utility except in cases of emergency. The utility should be notified as soon as possible after a seal has been broken.

106 EXTENSION OF NEW SERVICE FACILITIES

106.1 Application For Extension of New Service

Each request for extension of new service will require a written application for service in which the applicant agrees to pay any required contribution in aid of construction. The utility may require that the contribution in aid of construction be paid in advance of construction or may, at the utility's option, offer customers an installment payment plan.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****106.2 Wiring Affidavit**

The contractor or person responsible for the installation of the customer's electric wiring, appliances and other equipment related to each type of service shall deliver a notarized affidavit on a form supplied by the utility attesting to the fact that the work complies with the Wisconsin State Electrical Code and the service rules of the utility. Affidavits must clearly indicate the nature of the work done (such as residential wiring, residential fixtures, garage wiring, range, heaters, motors, or other wiring or equipment). For those cases involving wiring changes or additions which require the meter(s) to be replaced or relocated, or which require inspection by the utility, the affidavit shall include an itemized copy of the connected load, including lights, motors and appliances. Where such changes require new service entrances at a new location, the existing service entrance should not be disconnected before the new service entrance is ready for connection and operation.

If, upon inspection by the utility, installations are found to contain discrepancies, such discrepancies shall be corrected before permanent connection of service will be completed. Or, at its option, the utility may mail the customer a written request demanding conformity within a 10-day period or any prior service connection made by the utility will be disconnected.

The utility normally connects the service entrance wires to the service wires. No one else shall make these connections without the specific approval from the utility, in which case the customer shall assume responsibility for any damage that may result from making these connections. The utility will not be responsible for damage or injury resulting from unauthorized disconnection or reconnection of service wires.

106.3 Ownership of Extension

The title to every extension at all times is with the utility. The utility reserves the right at all times to add additional customers to an extension and make new extensions to an existing extension, under the provisions of these rules, without procuring the consent of any customer or customers contributing to the original construction costs, and without incurring any liability for refunding contributions except as additional customers may be added as provided for herein. (*See Wis. Admin. Code ch. PSC 113, Refunds.*)

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES**106.4 Right-of-way For Extensions106.4a Overhead Facilities

The applicant(s) for service shall furnish right-of-way easements and permits with clearing rights, without cost to the utility adequate for the line extensions necessary to serve them and along a route approved by the utility. Clearing shall either:

- (1.) Be done by the applicant(s); or
- (2.) Be done by the utility. In this case, the applicant shall, in advance of the clearing work, make a contribution to the utility in an amount equal to the utility's estimate of the cost thereof. Such a contribution shall be nonrefundable, except that after completion of the extension the utility will determine the actual cost of clearing work, recompute the contribution required, and will refund the excess, if any, of the contribution over that required as based on such actual cost.

106.4b Underground Facilities

The applicant(s) shall secure for the utility, without cost to the utility, such easements as the utility may require for the installation, maintenance or replacement of the underground lateral and necessary distribution line extension.

The applicant shall inform the utility of any known or expected underground obstructions within the cable routes on their property (septic tanks, drainage tile, etc.). Any earth fill added to bring the cable route to final grade prior to the underground construction shall not contain large rocks, boulders, debris or rubbish.

In the event of future changes in grade levels by the customer that would materially change the depth of cover over underground conductors, or affect transformer locations, the landowner shall notify the utility in advance of grading, and shall pay the utility its cost of moving or replacing its equipment to accommodate the change in grade. Such charge will also be made for changes in buildings, structures, foundations, walls, or other obstructions.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES**106.5 Construction Standards and Facilities Provided by Utility**

The utility shall provide safe, reliable service with extensions that conform, to the extent possible, to each of the following standards:

- (1.) **Route**: The utility shall make the extension over the most direct route that is the least expensive and least environmentally degrading. The customer shall provide or shall be responsible for the cost of all right-of-way easements, and permits necessary for the utility to install, maintain or replace distribution facilities. The customer shall either clear and grade such property or pay the utility to clear and grade such property. The customer is responsible for the cost of restoration of the property after the utility has completed installation and backfilling where applicable.
- (2.) **Design**: The utility shall design and install facilities to deliver service to the customer and the area at the lowest reasonable cost. The facilities shall comply with accepted engineering and planning practices. The design shall consider reasonable needs for probable growth in the area and local land use planning. Unwarranted excess capacity that would result in unnecessary cost increases to the utility and its customers shall be avoided. The utility shall be responsible for the incremental cost of distribution facilities that are in excess of standard design for the customer and normal area growth.
- (3.) **Efficient Use**: The utility's extension rules shall discourage the inefficient use of electricity by appropriately relating costs to the charges made for extensions.
- (4.) **Cost Estimates**: The utility shall engineer and estimate the cost of each extension based on reasonable current costs. Current costs may be estimated using job specific costs, average costs per foot or unit, or other costing method as appropriate.

106.6 Point of Termination

The applicant for new service may select, with the approval of the utility, the point at which the utility will deliver service at applicant-owned terminating facilities. The applicant will furnish, own and maintain circuits, meter socket and equipment beyond such point, except for metering equipment.

It is necessary that a customer's service entrance facilities be located at a point most readily accessible to the utility's distribution system. It is desirable, and often necessary, to avoid crossing adjacent property with service drops or laterals. If the distribution system is established in the rear of the premises, the service entrance must be brought to the rear of the building. Where the distribution system is located on the street or where no distribution system has been established, the customer shall request the utility to specify an acceptable location of the service entrance facilities. The utility will furnish this information in writing upon request.

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106.7 Meters

Meters will be furnished and installed by the utility. The customer, however, must furnish the meter socket and all necessary extra wiring to meet the meter connection and must furnish a safe and convenient place for the meter(s) where it will not be subject to adverse operating conditions. Where the customer has changed this condition by remodeling or adding to a building, thereby making the meter inaccessible, the utility will notify the customer in writing to correct the condition. U

In the event a customer desires an additional meter installed for his or her own convenience, the installation shall be entirely at the cost of the customer, including the cost of the meter. U

106.8 Metering Facilities

Meter sockets shall be approved by the utility and installed by the customer on the exterior of the building, a pole or pedestal as determined by the customer's need. Customer's service facilities, customer-owned yard light, or other equipment shall not be installed on a utility-owned pole. U

When a residence is built in the rural area and underground service is used, the meter may be placed on the customer's pole if permission is obtained from the utility prior to installation.

Any meter located other than as described above shall be approved in writing by the utility prior to installation or it shall be changed by the customer to conform to the utility standards.

Meters, service entrance switches, and service entrance outlets are sealed by the utility and such seals shall not be broken or tampered with without the consent of the utility except in cases of emergency. The utility should be notified as soon as possible after a seal has been broken. U

106.9 Number of Service Drops or Laterals Per Customer

The utility shall provide standard overhead service drops and standard underground service laterals at no charge to the customers.

Not more than one service drop or service lateral will be installed to the same building or utilization point except:

- (1.) Where more than one point of delivery is necessary because of voltage regulation, governmental requirements or regulatory orders.
- (2.) In a large installation (large power only) where, in the opinion of the utility, more than one service drop or lateral is necessary to meet the load requirements.

106.9 Number of Service Drops or Laterals Per Customer (continued)

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES**

- (3.) In row houses and other multiple occupancy buildings having areas separated by firewalls in compliance with the Wisconsin State Electrical Code.

If an existing customer with a single-phase service drop or lateral requests three-phase service, the customer shall rewire their equipment to operate from the three-phase service drop or lateral before three-phase service will be extended. The single-phase service drop or lateral will be removed from service after the three-phase service has been extended.

106.10 Overhead Service Drop

A standard overhead service drop shall be furnished by the utility to a suitable support on the customer's premises. The utility will provide supplemental information to the customer indicating the equipment that the customer shall install, own and maintain. This material will also indicate what Wisconsin State Electric Code provisions and city ordinances must be complied with for the installation of this equipment.

106.11 Underground Service Lateral

A standard underground service lateral shall be furnished by the utility to suitable service equipment on the customer's premises. This equipment shall be installed on the customer's building at a location approved by the utility.

The utility will provide supplemental information indicating what equipment the customer shall install, own and maintain for underground service and indicate what provisions of the Wisconsin State Electric Code and city ordinances must be complied with for the installation of this equipment.

106.12 Transformers

The utility shall provide standard design transformers necessary to serve the customer's load at no charge.

106.13 Nonstandard Service Facilities

If the proposed extension requires nonstandard service facilities or if the customer requests nonstandard facilities, the utility may require that the customer pay a contribution in advance of construction for the cost of the facilities in excess of the cost of standard design facilities.

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ELECTRIC RULES106.14 Extraordinary Investment by Utility for Extension

Proposed extensions may be reviewed for economic considerations. If the cost of an extension exceeds five times the average embedded cost to serve a customer in the same class as the customer for whom the extension is to be made, the utility may require a contract with the customer. Under the terms of the contract, the customer may be required to pay the recurring estimated operation and maintenance expenses associated with that portion of the extension that is in excess of five times the average embedded cost at the time the extension was made. The reasons and supporting analysis for each contract will be furnished the customer and the Public Service Commission of Wisconsin (Commission), in writing. The utility will inform the customer of the customer's right to ask the Commission for a review of the extension costs and contract provisions. The utility will notify the Commission in writing, when a service extension is denied, including the reasons for denial.

107 INSTALLATION CHARGES AND EMBEDDED COST CREDITS107.1 Definition of Equipment, Installation Charges and Embedded Cost Credits

For purposes of implementing these installation charges the following definitions shall apply:

107.1a Customer Classifications

Customer classifications are based on usage characteristics. Each classification has a distinct installation charge and embedded cost credit. For definitions of distribution and service facilities installed in new installations see Section 103. Examples of customer classifications are as follows:

- (1.) Residential Service
- (2.) General Service
- (3.) Power Service
- (4.) Street Lighting

107.1b Total Cost of Installation

The total cost of an extension shall be defined as the cost of the extension of primary and secondary lines, (excluding the standard meter, the necessary standard service drop or service lateral and individual standard transformer capacity); reconstruction of existing main feeders including changing from single-phase to three-phase or construction of new feeders made necessary solely by addition of such customers; the cost of tree trimming or right of way clearing; securing easements; moving conflicting facilities; and all other costs incidental to furnishing service. The customer is responsible for the cost of restoration of the property after the utility has completed installation and backfilling where applicable. This definition applies to both overhead and underground distribution systems. If it is found to be advisable for the utility to install facilities in excess of that required to serve the new customer applying for service, the added cost of these facilities will not be used in determining the cost of the extension.

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107.1c Installation Charge

The installation charge is the total cost of installation less the average depreciated embedded cost of the distribution system (excluding cost of the standard transformer and service facilities). Seasonal customers shall receive one-half the average embedded cost allowance of a year-round customer for the same customer classification.

107.1d Average Depreciated Embedded Cost

The Public Service Commission of Wisconsin determines the embedded cost of the distribution system (excluding the standard transformer and service facilities) for each customer classification, as indicated below. The average depreciated embedded cost by customer classification is listed in Schedule OC-1.

- (1.) Residential Service: The average depreciated embedded cost is determined by dividing the original cost less the estimated accrued depreciation of the distribution system and less customer contributions and advances for construction allocated to this customer classification by the number of customers in the group.
- (2.) Apartment and Rental Units Separately Metered: The owner of an apartment or rental unit applying for an extension of service shall receive the same average depreciated embedded cost credit, that applies for residential service, per unit metered.

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ELECTRIC RULES107.1d Average Depreciated Embedded Cost (continued)

- (3.) Subdividers and Residential Developers: The same average depreciated embedded cost credit, that applies for residential service, would apply per unit energized within five years from the installation of the contributed extension.
- (4.) General Service (Including Multi-Unit Dwellings If Billed on One Meter): The average depreciated embedded cost credit is determined the same way as Residential.
- (5.) Power Service: The embedded allowance is determined by dividing the original cost less the estimated accrued depreciation of the distribution system and less customer contributions and advances for construction allocated to this customer classification by the estimated average billed demand of these customers. When there is an upgrade, the average billed demand is the difference between the averaged billed demand before and after the upgrade.
- (6.) Street Lighting: The dollar amount per fixture is determined by dividing the overall depreciated cost of the distribution facilities allocated to the street lighting class, less credits for past customer contributions and advances for construction, by the total number of lighting fixtures in that classification.

All average depreciated embedded costs (by rate class) shall be subject to review by the Public Service Commission of Wisconsin, as part of each general rate case proceeding.

107.2 Total Cost of Installation by Customer Classification107.2a Residential, General Service, Power Service, and Street Lighting Classes:

Will be charged the total installation cost less the average depreciated embedded cost as defined in Section 107.1d.

107.2b Residential and Commercial Developers and Subdividers:

Residential and Commercial developers and subdividers of single- and two-family subdivisions shall pay, as a minimum, a partially refundable contribution which is the estimated cost of distribution facilities to be installed for the area being developed. The average depreciated embedded cost is refundable as structures are built and connected to the electric utility facilities, as defined in Section 107.1d.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES107.2c Installation Charges for Multi-Family Residential Housing Units:

Will be the total installation cost less the average depreciated embedded cost, as defined in Section 107.1d, per each living unit in the multi-family building.

107.2d Other Installation Charges

In addition to the installation charges provided above, the utility may require the customer to pay, in advance of construction, the estimated direct costs for those distribution service facilities which,

- (1.) Are in excess of standard utility design and construction,
- (2.) Follow a route different than the most direct route as in Wis. Admin. Code ch. PSC 113, as determined by the utility, or
- (3.) Require abnormally high installation costs due to abnormal soil conditions, including trenching in rocky soil, frozen ground, or other similar conditions. (Winter construction will normally apply between December 1 and April 1.)

All such payments for these conditions are subject to partial refund as additional customers connect.

107.2e Adjustments to Estimates of the Total Cost of Installation

Section 107.2 explains the method for estimating the total cost of installation. The utility shall adjust its estimate of construction costs to reflect the costs that are actually incurred. Upon completion of an installation which differs from the utility's original cost estimate, a recalculation of the customer contribution shall be made using the same method as was used to determine the original contribution. It said recalculation differs by more than \$20 from original estimate, a refund or additional billing shall be rendered to the customer.

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108 REFUNDS OF CUSTOMER CONTRIBUTIONS BY TYPE OF CUSTOMER108.1 Eligibility for Refunds

The utility shall make refunds to a customer who made a contribution for an extension (a contributed extension) when the utility makes an extension from the contributed extension to a second customer that does not require a contribution from the second customer (a non-contributed extension).

In all cases, refunds to the customer making the original contributions shall be limited to the first five years from the installation date. The utility shall make the refund to the customer who made the original contribution or the current property owner of record unless it has a written record from that customer assigning the refund rights to another customer.

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ELECTRIC RULES108.2 Application of the Refund

- (1.) When additional customers are connected to an existing extension, which required an installation charge from the original customer for whom the extension was first made, that original customer may receive a refund from the utility.
- (2.) If the cost of adding a new customer to an existing extension is less than the average depreciated embedded cost, the new customer will be charged nothing. The original contributor of the extension shall be refunded the difference between the average depreciated embedded cost and the cost of adding the new customer.
- (3.) If the cost of additional distribution facilities exceeds the average depreciated embedded cost of a customer classification, the construction will be considered a new extension. In this case no refund is due the original contributor.
- (4.) The original contributor shall receive refunds, if any, for only the first five years from the date the original extension is energized.
- (5.) Refunds shall be made to the original contributing customer by the utility within 20 days after the additional customer's cost of installation is determined.

The amount of the refund shall be based on the embedded cost allowance in effect at the time the contributed extension was installed, or the current embedded cost allowance, whichever is greater. In no case shall the total refund exceed the total installation charge.

109 OVERHEAD SERVICE EXTENSIONS109.1 Applicability

The rules of this section apply to the extension of overhead electric service to all classes of retail customers requesting new service in all areas served by the utility.

The utility will extend electric service to a new customer(s) or existing customer(s) furnished by means of extending its overhead distribution system, except that three-phase service may be furnished by means of phase conversion equipment from a single-phase line.

109.2 Contributions for Overhead Extension

The charge for all overhead extensions shall be the total cost of installation as defined in Section 107.2 less the average depreciated embedded cost. (See Section 107.1d)

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****109.3 Combination Single-Phase and Three-Phase Construction**

In the event an extension is partially or completely supported on structures used for supporting transmission circuits, or in the event the extension is built to serve both single-phase customers and three-phase customers, the utility will compute, and apportion among the customers served, the extension contribution requirements and contribution refund rights in a fair and equitable manner consistent with the pertinent facts, and will retain in its files a memorandum of such computation and apportionment. The contribution requirement of the single-phase customers shall not be greater than would have been the case if an extension (complying with present engineering standards) had been constructed to serve only the single-phase customers.

110 UNDERGROUND SERVICE EXTENSIONS**110.1 General Rules on Underground Service Extensions**

The utility will extend utility-standard underground service to all classes of retail customers requesting new service in all areas served by the utility.

110.2 Stipulations on Availability of Underground Service Extensions

Underground service extensions to be furnished by the utility are limited to those which may be placed in locations where grade levels and other conditions are satisfactory to the utility, such as across residential or farm yards or commercial premises or along driveways. The route of the underground construction must be clear of any trees, brush, fences or other surface obstructions that would interfere with normal operation of trenching equipment. Trench backfill shall consist of the original soil and shall not be power tamped. Lawn and landscaping restoration shall be the applicant's responsibility.

Underground service extension in locations such as beneath undeveloped land, quarries, gravel pits, swamps and water will not be furnished except by written approval of the utility for each installation.

The utility will not install an underground service extension where engineering, operating, construction, safety or legal problems would, in the utility's judgment, make it inadvisable to perform the installation, unless these problems can be resolved by the payment of contributions and/or the charges as provided for in these extension rules.

Notification must be given to the utility sufficiently in advance of construction so that a sequence of construction can be provided for and the work coordinated with other utilities involved.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****110.2 Stipulations on Availability of Underground Service Extensions (continued)**

If the trench cannot for any reason be dug prior to the freezing of the soil, the utility may temporarily install secondary voltage conductors in suitable mechanical protection on top of the ground and dig the trench when the ground is thawed.

The utility shall not be prevented from installing underground electric equipment where necessary by reason of physical conditions or congestion in the area, when this type of construction is the most economical type for the conditions.

110.3 Contributions for Underground Extensions

The charge for all underground extensions shall be the total cost of the installation as defined in Section 107, less the average depreciated embedded cost as defined in Section 107.1d.

110.4 Contribution for Added Costs Due to Unusual Conditions

For unusual construction costs a contribution is required which may be subject to a partial refund as additional customers attach. The cost shall include:

- (1.) An amount equal to the estimated cost of boring or pavement cutting required or where conductors must be installed in rocky soil, frozen ground, or other similar conditions.
- (2.) An amount equal to the cost of any special requirements such as municipal requirements, rearrangement of facilities due to a change of plans or the need for an underground service extension different from or more elaborate than the utility's standard underground construction.
- (3.) An amount equal to the estimated additional cost for trenching through any area where normal plowing and trenching methods cannot be used, for example, ledge rock, boulders, land-fill, etc.

Upon completion of the construction, if the actual amount of such extra cost is less than the estimated amount, the utility will refund the difference between the estimated and actual costs.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****110.5 Combination of Overhead and Underground Extension**

In accepting an application for underground electric service under this schedule, the utility does not undertake to avoid the construction of overhead lines in the neighborhood, which may be necessary to serve customers who demand and have the right to receive service from overhead lines. However, in order to avoid duplication of facilities, applicants for electric service whose premises can be served from an underground distribution system that has previously been installed adjacent to the applicant's premises shall be required to be served by an underground lateral from such system and shall pay the contributions and charges required in these extension rules.

110.6 Underground Distribution Areas**110.6a General Rules on Underground Distribution Areas**

The utility will install utility-standard single-phase underground electric distribution system in accordance with this schedule where required by ordinance or when requested by and agreed to by the property owner(s) or developer or subdivider of the land area to be served. (However, all lines exceeding 15,000 volts in such areas may be overhead.)

Electric distribution facilities provided for under this rule are only for providing service to permanent buildings. The utility will own and maintain the underground conductors and appurtenances, and the character and location of such facilities shall be at the discretion of the utility.

110.6b Establishment of Underground Distribution Areas**(1.) Subdivisions**

- a. For purposes of this schedule a subdivision shall be defined as a division of lands consisting of five or more contiguous lots. Lots directly across a street from each other are considered to be contiguous.
- b. To qualify as an underground distribution area the property owner(s) or land developer or subdivider shall have provided a suitable recorded plat of the subdivision with deed restrictions, all satisfactory to the utility, to require all utility service to be supplied by underground lines and prohibiting overhead lines, except for lines exceeding 15,000 volts, and with easements shown.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****110.6b Establishment of Underground Distribution Areas (continued)**

- c. An area that qualifies as a subdivision may be established as an underground distribution area in either of the two following ways:
 - (1) All new subdivisions not already receiving electric service are defined as underground distribution areas where by ordinance the electric distribution systems are required to be underground.
 - (2) A group of property owners or land developer or subdivider may request that an area be served by an underground distribution system. Such area shall be specifically defined and of reasonably regular shape.
- (2.) Mobile Home Courts: A new mobile home court or an expansion of an existing mobile home court, may be established as an under-ground distribution area where:
 - a. The court consists of five or more established mobile home locations, all of which are contiguous.
 - b. Occupancy of the mobile homes is to be on a year-round basis.
 - c. The owner of the mobile home court provides the utility a written commitment that all utility service will be supplied by underground lines and prohibiting any overhead lines, except for lines exceeding 15,000 volts.
- (3.) Condominium Developments and Apartment House Complexes: A new residential condominium development, apartment house complex or an expansion of an existing such housing facility may be established as an underground distribution area where:
 - a. The condominium or apartment complex consists of five or more dwelling units.
 - b. The developer provides the utility a written commitment that all utility service will be supplied by underground lines and prohibiting any overhead lines, except for lines exceeding 15,000 volts.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES110.6b Establishment of Underground Distribution Areas (continued)

- (4.) Easements: The property owner(s) or land developer or subdivider shall have secured for the utility, at no cost to the utility, such easements as the utility may require for the installation, operation and maintenance of its facilities including but not limited to easements for its transformers and switches. The property owner(s) or land developer or subdivider shall inform the utility of any known or expected underground obstructions within the cable routes. Any earth fill added to easements to bring the grade to final level shall not contain any large rocks, boulders, debris or rubbish.

In subdivisions, easements shall be provided along side lot lines as necessary for underground cables to street light locations approved by appropriate governmental authority.

- (5.) Expansion of Underground Distribution Areas: An established underground distribution area may be expanded to include such lots or building sites as are contiguous to it which are not already served by overhead lines. The owners of such lots shall be responsible for seeing that the lots meet the requirements specified above for the underground distribution area to which it is contiguous.

110.6c Contribution and Charges for Extension

- (1.) Contribution for Construction Within Underground Distribution Area: All of the provisions of contributions for construction of underground extensions will apply except that the extension allowance will apply to those lots at which dwelling units are occupied or under construction (construction has proceeded above the foundation level) only. The utility shall require that the contribution in aid of construction be paid in advance of construction. U
- (2.) Distribution Line to Underground Distribution Area: Where an extension of the utility's existing distribution system is required in order to reach the underground distribution area, said extension will normally be overhead construction. The extension allowance for the overhead distribution line will apply to those lots on which dwelling units are occupied or under construction (construction beyond the foundation level) only. The utility shall require that the contribution in aid of construction be paid in advance of construction. If required by statute or ordinance, or if required by the conditions in the judgment of the utility, all or a portion of the extension will be underground. A refundable contribution as provided in Section 110.6c(1), will apply. U

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES111 MODIFICATIONS TO EXISTING DISTRIBUTION AND SERVICE FACILITIES111.1 Relocation and Rebuilding of Existing Distribution Facilities

- (1.) Where responsibility can be determined by the utility, the customer responsible for relocation, rebuilding, or other modification of existing distribution facilities shall pay a contribution based on the following:

Estimated direct cost of new facilities

Less: Accrued depreciation of facilities to be removed

Less: Estimated net salvage of the facilities to be removed

Plus: Estimated cost of removal of existing distribution facilities

Equals: Charge for modifications to existing facilities

The costs and credits of the above shall be determined from the available records of the utility. The utility shall endeavor to maintain records that permit a reasonable calculation of these costs and credits. The contribution shall be refundable when the extension is less than the embedded allowance as per Section 108, Refunds to Customers.

- (2.) Where the utility chooses to relocate its distribution system and it is practicable to bring a service drop or lateral to the existing service entrance facilities, the utility will make the necessary changes in the customer's wiring and service equipment without expense to the customer.
- (3.) In the event that the utility is ordered by a unit of government to move its distribution facilities, a new service drop will be installed, where practicable, to the existing service location without expense to the customer. If, in the opinion of the utility, it is not practicable to utilize the existing service entrance facilities, the utility will specify a new service location. The utility is not required to furnish new service entrance, cable, conduct, or service equipment unless it makes a practice of supplying this equipment. The utility shall, however, run a service drop to the nearest point on each building served from the new location and remove the old service drop without expense to the customer.

111.2 Replacement of Overhead Distribution Facilities with Underground Distribution Facilities

A customer requesting the utility to replace existing overhead distribution facilities with underground distribution facilities shall pay the contribution in aid of construction and receive refunds as shown in Section 111.1(1) above.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES111.3 Upgrade of Distribution Facilities Due to Change in Load

Customers who request an upgrading of the utility distribution facilities due to a change in the character of their load shall pay for the construction costs incurred by the utility to provide the requested additional facilities.

- (1.) Demand Schedule: Customers who are served under a demand rate schedule shall receive an embedded cost allowance. The kilowatts of demand to be used in determining the allowance shall be the customer's average billed demand after the upgrade less the customer's average billed demand before the upgrade.
- (2.) Customers Transferring to a Different Energy-Only Classification: If a customer served under an energy-only sub-classification prior to the upgrade qualifies for a different energy-only sub-classification after the upgrade, the customer shall receive a cost allowance equal to the difference between the two embedded cost allowances.
- (3.) Customers Transferring to a Demand Classification: If a customer is served under an energy-only classification prior to the upgrade, the customer shall receive an embedded cost allowance. The kilowatts of demand to be used in determining the allowance shall be the customer's average billed demand after the upgrade less an estimate of the customer's prior average demand.

111.4 Upgrade of Service Facilities

- (1.) Overhead Service Drop: The utility shall not charge the customer to upgrade an overhead service drop with a larger size overhead service drop up to the maximum standard size.
- (2.) Underground Service Lateral: The utility shall not charge the customer to upgrade an underground service lateral with a larger size underground service lateral up to the maximum standard size.
- (3.) Overhead Service Drop to Underground Service Lateral: The utility shall require a contribution from a customer requesting to have an overhead service drop upgraded to an underground service lateral. The contribution shall be equal to the cost of the underground service lateral less the cost of an equivalent overhead service drop.
- (4.) Transformers: The utility shall not charge the customers to upgrade their transformer to the maximum standard capacity.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****112 EXTENSIONS OR MODIFICATIONS OF TRANSMISSION FACILITIES
TO RETAIL CUSTOMERS**

Before a utility extends or modifies its transmission facilities to a retail customer, the utility shall require a contract between the utility and the customer which describes the facilities to be constructed, such as the cost of construction, apportions the responsibility for the construction costs between the utility and the customer, and provides a supporting analysis for the construction and the cost apportionment. The utility shall submit the contract to the Commission for approval. The Commission shall review the contract to assess whether existing ratepayers would be adversely affected by the proposed extension or modification. If the Commission does not respond to the utility within 20 working days from the date of receipt, the contract is approved.

113 TEMPORARY SERVICE

The utility will extend its service to fairs, carnivals and like short-time gatherings and uses (not including short-time uses in the nature of auxiliary, stand-by or seasonal use) under the following rules:

- (1.) The customer will agree to reimburse the utility for its expenditures in extending service.
- (2.) The cost of extending service shall include all items of labor and materials, with the customary overhead charges, necessary to furnish the customer with the service requested. It shall also include any costs involved in the dismantling of materials and their return to stock. Where materials dismantled have a salvage value, the cost of extending service will be credited with such salvage value.
- (3.) All energy will be measured at one standard voltage at some convenient point designated by the utility.
- (4.) The customer will make the necessary arrangements and provide for the necessary equipment in the event more than one voltage is required.
- (5.) The cost of all construction (labor and materials) necessary to distribute energy on the premises occupied by the customer will be borne by the customer.
- (6.) The utility may require the customer to make an advance deposit sufficient to cover the costs of extending service and the estimated bill for energy.
- (7.) The rates applicable in the area where temporary service is rendered shall be applied in determining the customer's bill.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****114 TEMPORARY SERVICE FOR CONSTRUCTION**

- (1.) The provisions of Section 113 of these rules shall apply for temporary service for construction. See Schedule OC-1 for the maximum charge that shall apply. **U**
- (2.) Temporary service shall be given to a customer connection only when constructed in accordance with the sketch as provided by the utility. The post supporting the unit shall be located as near as possible to the location of permanent service to the building. Abnormal conditions involving compliance with the foregoing provision will be cleared with the utility and permission granted by the utility prior to locating the customer connection.
- (3.) All temporary service shall be maintained in a safe manner in order to keep the utility harmless from injury to persons or property. The service shall remain temporary only for a reasonable time and must be made permanent when the utility directs such action.
- (4.) Should the customer elect to receive permanent service the installation charges for extension of new electric service as provided for in Section 107 will apply. Credit shall be given for the payment already made for that portion of the temporary service facilities that can be used for permanent service without modification.

115 EMERGENCY SERVICE

A customer purchasing electric service from the utility under any of the utility's filed rates for firm service, and requesting a reserve line or a separate service connection other than that from which regular service is obtained should consult the utility to determine if such service is available.

The utility may supply emergency service facilities under the terms of a special contract, providing the customer shall pay all costs associated with such facilities. The utility will then provide the emergency service distribution facilities required.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES116 GENERAL RULES ON CUSTOMER UTILIZATION EQUIPMENT

The rules in this section are designed to assist in maintaining a high standard of electric service for all classes of customers with maximum economy based on electric service rules of the Public Service Commission of Wisconsin governing the variation of voltage at customer service entrances.

Before installing any utilization equipment, it shall be the customer's responsibility to notify the utility of the planned addition. The utility will advise customers concerning a specific installation on request. The utility will not test or investigate any customer's equipment except when necessary to determine the cause of substandard voltage conditions. The utility shall, at all reasonable times, have the right to enter a customer's premises to examine the customer's equipment. The utility shall refuse to connect service or will suspend service when such equipment does not conform to these rules and it has not been corrected after reasonable notice. U

All wiring and other electrical equipment on the premises furnished by the customer shall be installed and maintained by the customer at all times in conformity with the requirements of the Wisconsin State Electrical Code and with the Rules and Regulations of the utility.

Electrical apparatus to be used in connection with and operated by energy furnished by the utility shall be of such design and construction, and installed and operated in such manner, so as not to interfere unreasonably with the utility's service to other consumers. In the event that such apparatus does not comply with the above requirements, the utility may discontinue service until the customer has remedied the conditions causing interference with the utility's service to other consumers. The utility may require the installation of a separate power service to serve equipment which does not conform to the rules which govern lighting service or to serve other devices which are likely to interfere with standard voltage regulation.

Where a customer connects single-phase equipment to a three-phase service, the single-phase equipment shall be connected to prevent unbalance of the loads on the three-phase service in excess of 10 percent. A power factor of 80 percent (or as otherwise specified in the company's tariffs) shall be maintained by the customer. When these requirements cannot be met, the customer shall apply for a separate single-phase service. U

It shall be the customer's responsibility to install any protective devices such as time-delay under-voltage relays, phase reversal relays, devices to protect against unbalanced phase operation of three-phase equipment and any other device necessary to prevent damage to utilization equipment that might result from imperfections in the supply of power.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES****117 MOTORS AND MOTOR CONTROL**

In order to prevent impairment of service to other customers, it is necessary to establish limits for the allowable starting currents for motors. Before selecting motor equipment, the customer should consult the utility to determine the specific voltages available at any location.

When a motor is used to drive equipment that requires varying torque during each cycle of operation, such as a compressor or reciprocating pump, the combined installation should have enough momentum in its moving parts so that its operation will not interfere unduly with service to other customers.

- (1.) Types of motor service available on general service lighting rates, single-phase only are as follows:
- a. Single-phase fractional horsepower motors: Automatically controlled and frequently started, whose locked rotor currents do not exceed 23 amperes may be connected to 120-volt circuits.
 - b. Single-phase motors, one horsepower or less: Manually controlled or infrequently started, whose locked rotor currents do not exceed 50 amperes may be connected to 120-volt circuits. No single-phase motor larger than 1 horsepower shall be operated on a 120-volt circuit.
 - c. Infrequently started single-phase motors of 10 horsepower or less may be connected to 240-volt other circuits if their locked rotor currents do not exceed the values shown in the next section describing motor service available on power rates.
 - d. In urban areas infrequently started three-phase motors of 10 horsepower or less; connected through single-phase to three-phase converters may be used on other circuits.
 - e. Single-phase motors above 10 horsepower are not permitted in rural areas.

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ELECTRIC RULES

117 MOTORS AND MOTOR CONTROL (continued)

(2.) Types of motor service available on power rates and combined light and power rates, single-phase and three-phase are as follows:

- a. Motors with long periods of continuous operation under maximum load conditions and having not more than four starts per hour may be connected if their locked rotor currents do not exceed those listed in the following table. Consult the utility where these conditions cannot be met, or where equipment ratings and/or starting characteristics exceed the values in the table below:

Motor Starting Table

<u>Motors Rated</u>	<u>Total Locked Rotor Current Not to Exceed</u>
120 Volts, Single-Phase	50 Amperes
240 Volts, Single-Phase 2 Horsepower or Less	60 Amperes
2 to 6.5 Horsepower	60 Amperes Plus 20 Amperes Per Horsepower in Excess of 2 Horsepower
6.5 to 15 Horsepower	150 Amperes Plus 10 Amperes Per Horsepower in Excess of 6.5 Horsepower
240 Volts, Three-Phase 2 Horsepower or Less	50 Amperes
2 to 19.9 Horsepower	50 Amperes Plus 14 Amperes Per Horsepower in Excess of 2 Horsepower
20 to 40 Horsepower	300 Amperes Plus 4 Amperes Per Horsepower in Excess of 20 Horsepower
50 Horsepower and Over	8 Amperes Per Horsepower

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES**117 MOTORS AND MOTOR CONTROL (continued)

- b. Motors above 10 horsepower rating are to be three-phase.
- c. New installation of motors of 50 horsepower or larger should be approved by the utility as to motor type, starting and protective equipment, and as to availability of an adequate power supply at the proposed location.
- d. Motors subject to frequent starts, such as elevator and hoist motors, when connected to the secondary distribution system, should have their starting current limited to 100 amperes.
- e. For motors of higher voltage rating than shown in the motor starting table, the allowable currents are inversely proportional to the voltages.

118 MISCELLANEOUS EQUIPMENT

X-ray equipment operated on lighting or combined lighting and power services shall have input currents not exceeding 24 amperes without specific approval of the utility.

The installation or use of heated sidewalks is prohibited as specified in Section 101.124 of Wisconsin Statutes. **U**

All other equipment not specifically provided for in this section will be subject to approval of the utility on the basis of starting currents specified herein for motors with the same frequency of starting. Customers are advised to consult the utility before connecting any such apparatus.

119 PRIVATE POWER PLANTS

No generator may be electrically connected to the utility's lines or equipment without the written consent of the utility and with adequate physical arrangements to prevent hazard to life and damage to utility property.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY

ELECTRIC RULES119 PRIVATE POWER PLANTS (continued)

After advance written notice and advance approval by the utility, a customer may install their own standby emergency generating equipment and connect it to the customer's wiring systems, provided the connection is through a double-throw switch or other means which will prevent accidental electrical connection of the generator to the utility's facilities at any time. All cost of installation and equipment shall be borne by the customer. The customer shall not operate such equipment until inspection by the utility has been completed. In the event that any customer wishes to engage in parallel operation with the facilities of the utility, service will not be rendered to such customer until a written contract has been entered upon between the customer and the utility and the conditions of delivery of electric energy are fully outlined therein.

See Wis. Admin. Code ch. PSC 114 (Wisconsin State Electrical Code).

120 PAYMENT FOR CONTRIBUTION IN AID OF CONSTRUCTION

Each request for extension of new service will require a written application for service agreeing to pay the contribution required, if any. The utility shall require that the contribution in aid of construction be paid in advance of construction.

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121 STRAY VOLTAGE SERVICE

- (1.) Under normal operating conditions, a neutral-to-earth current or voltage may exist on the grounded or grounding conductors or other conductive objects on the customer's premises. The source of the current or voltage may be located on the premises, off the premises, or a combination of both. Upon the customer's request, the utility will investigate inquiries associated with neutral-to-earth current or voltage concerns.
- (2.) Stray voltage is a 60 Hz steady state AC RMS voltage that can be measured across a 500-ohm shunt resistor, which has been connected between two points that livestock may contact simultaneously. "Steady state" means the value of a current or voltage after all transients have decayed to a negligible value. "Transients" mean changes in the steady state current or voltage caused by faults, operation of protective devices, switching, reclosing, tap changing, motor starts or stops, motor stalls or other phenomena that are temporary in nature. The Public Service Commission of Wisconsin has defined the "level of concern" as 1 volt or 2 milliamperes (mA) AC RMS steady state at cow contact.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES**

- (3.) If a customer requests stray voltage investigative analysis more than two times in a 12-month period, and the utility has not found stray voltage above the level of concern in any of these analyses, the utility may charge a fee for any further stray voltage analyses it performs during the remainder of the 12-month period. The fee may not exceed \$320, which is estimated to be the cost of the additional requested service.
- (4.) Following a determination by the utility that, under normal operating conditions, the contribution to animal contact current from off-farm sources is in excess of 1 mA, the utility shall implement, at its expense, measures to reduce this contribution to below 1.0 mA. For farm facilities housing livestock where stray voltage from off-farm sources is a concern, it may be necessary under certain conditions to modify the farm or utility electrical system, or both.
- (5.) The utility shall, based on a technical and economic analysis of acceptable alternatives for lowering levels of stray voltage at the given location, determine whether long-term system modification should be on-farm, off-farm or both. If the utility, with the consent of the customer, chooses to install a long-term mitigation device (e.g., an electronic grounding system or equipotential plane) on farm property, the customer will assume ownership of the device. The utility will respond to reasonable customer requests regarding maintenance of the device. The customer is responsible for the daily monitoring and energy costs of the on-farm mitigation device, if any. The customer may be required to sign a Stray Voltage Reduction Agreement prior to installation of an on-farm mitigation device.
- (6.) The utility will not install any mitigation device(s) where its stray voltage investigation reveals unsafe conditions, or the inspection report of a state certified commercial electrical inspector or a state certified master electrician reveals that conditions do not comply with applicable electrical codes. If the utility's investigation reveals unsafe conditions, the utility shall notify the customer of the problems found and the potential hazards, and shall recommend the customer take prompt action to remedy the hazard.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES**

- (7.) In the event modification of on-farm or off-farms systems, to reduce off-farm stray voltage contribution, is not required, the customer may request separation of primary and secondary neutrals. The neutral reconnection device(s) ["isolator(s)"] used for this purpose shall be approved for use by the utility and the Public Service Commission of Wisconsin. Prior to installation, the customer shall submit an application form, a satisfactory farm wiring inspection report which has been issued by a state certified commercial electrical inspector or a state certified master electrician, and submit payment for all costs associated with the neutral separation. The customer may be required to sign a Customer Requested Neutral Separation Agreement and may also be required to sign a Hold Harmless/Indemnification Agreement and Release approved by the Public Service Commission of Wisconsin. Separation costs shall include labor, equipment, and materials [excluding the isolator(s)] necessary for both isolator(s) installation and a post-separation analysis of possible bypass circuitry. Costs may vary and may, therefore, be subject to a specific determination for each farm location. The isolator(s) shall be owned by the utility and shall be leased to the customer at a lease rate of \$35.00 per isolator, per month. This lease rate includes an appropriate amortized fee to cover the cost of an annual inspection designed to assess isolator effectiveness and to ensure that the isolator(s) continues to perform its intended function of neutral reconnection under fault conditions. Lease agreement shall require monthly billings.
- (8.) If within one year of the date of installation of a customer-requested isolator(s), the customer requests isolator(s) removal, the utility shall refund to the customer all lease amounts which the customer has paid to date.
- (9.) Where modifications to on-farm or off-farm systems to reduce off-farm contribution is required but cannot be accomplished within five working days, the utility may install a temporary isolator(s). The customer may be required to sign a Temporary Neutral Separation Agreement prior to installation. The utility must remove the isolator(s) and reconnect the neutrals within 90 days, unless it receives a waiver from the Public Service Commission of Wisconsin or the customer completes a Customer Requested Neutral Separation Agreement. Upon receiving a completed Customer Requested Neutral Separation Agreement, the utility (not the customer) will provide the inspection of farm wiring by a state certified master electrician or state certified commercial electrical inspector. If any wiring code violations are found and the customer corrects them within 60 days, the utility will keep the isolator(s) in place. Otherwise, it must remove the isolator(s) and substitute another mitigation technique to reduce off-farm stray voltage to 1.0 mA or less.

NORTHWESTERN WISCONSIN ELECTRIC COMPANY**ELECTRIC RULES**

- (10.) Should the customer whose neutrals were temporarily separated as provided for in (9.) above desire the isolator(s) be left in place following the required reduction of off-farm stray voltage contribution, the customer may request the continuation of this service in accordance with the terms and conditions established in (7.) above. The agreement shall be contingent on receipt of a satisfactory wiring inspection report issued by a state certified commercial electrical inspector or a state certified master electrician. Initial installation costs will be waived.
- (11.) At farm locations where primary and secondary neutrals have been separated at the request of the customer as provided for in (7.) and (9.) above, cost-free stray voltage investigative services may be limited to an annual investigation that determines the effectiveness of the isolator and isolation and an analysis of utility facilities only. If the customer requests on-farm stray voltage analysis or additional determinations of isolation effectiveness, the Utility may charge a \$320 analysis fee.
- (12.) Numerous locations exist where primary and secondary neutrals have been separated for various reasons prior to the order date, July 16, 1996. As stray voltage investigations are performed at these locations, either at customer request or incident to existing utility isolator removal efforts or system modifications, and the utility's stray voltage contribution under normal operating conditions is determined to be less than 1.0 mA, these customers shall become subject to all of the conditions set forth above.
- (13.) Prior to July 16, 1996, the utilities shall perform the required stray voltage investigation and separate the primary and secondary neutrals within 45 days of the receipt of a Public Service Commission of Wisconsin approved Isolation Request form and a satisfactory farm wiring inspection report which has been issued by a state certified commercial electrical inspector or a state certified master electrician. Subsequent to July 16, 1996, the utilities shall perform the investigation and separation within 30 days of the receipt of the above-referenced documentation. The utility shall not be required to initiate the neutral separation work requested prior to receipt by the utility of full payment for all costs associated with the neutral separation, as specified in (7.) above.
- (14.) The utility may not install, or permit the continued use of, an isolator(s) at locations where livestock are not and/or no longer will be housed.
- (15.) The company may supply service at one point to a customer for distribution by the customer to a number of buildings owned by the customer, provided that such buildings are located on contiguous properties including those directly across public thoroughfares.